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Incorporating Historic Facility Geospatial Data and Federal Preservation Requirements into SDSFIE/FMSFIE

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and Bruce A. MacAllister

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ABSTRACT: The U.S. Army Engineer Research and Development Center – Construction Engineering Research Laboratory (ERDC-CERL) was tasked to co-develop with the ERDC Information Technology Laboratory (ERDC-ITL) a definitive geospatial data model to include data types that will (1) optimally describe historic facilities in terms that are essential for complete and accurate reporting and (2) function within SDSFIE/FDSFIE (Spatial Data Standard for Facilities, Infrastructure, and Environment/Facility Management Standard for Facilities, Infrastructure, and Environment). The purpose of the investigation was to help develop an improved methodology that will provide more reliable information, more efficiently, about the Department of Defense historic property inventory. An improved methodology for tracking historic property attributes and locations could reduce Department of Defense administrative costs related to complying with the reporting requirements of the National Historic Preservation Act of 1966 (as amended).

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Preface

The study was performed for the U.S. Army Engineer Research and Development Center – Information Technology Laboratory (ERDC-ITL) under Program 21 2020, “Operations and Maintenance – Army”; Project 02.042, “SDSFIE Standards for Historic Buildings Project.”

The work was performed by the Land and Heritage Conservation Branch of the Installations Division (CN-C), Construction Engineering Research Laboratory (ERDC-CERL). The ERDC-ITL project manager and technical monitor was Dr. Laurel T. Gorman, CEERD-ID, and the ERDC-CERL project manager was Julie L. Webster, CEERD-CN-C. At the time of publication, Michael L. Denight was Acting Chief, CEERD-CN-C; Dr. John T. Bandy was Chief, CEERD-CN; and Dr. William D. Severinghaus, CEERD-CV-ZT, was Technical Director for Sustainable Ranges and Lands. The Deputy Director of ERDC-CERL was Dr. Kirankumar Topudurti and the Director was Dr. Ilker Adiguzel.

The Commander and Executive Director of ERDC was COL Richard B. Jenkins and the Director was Dr. James R. Houston.

1 Introduction

1.1 Background

The Department of Defense (DoD), including the military services, installations, agencies, and field operating activities, is held accountable for managing its cultural resources in compliance with Federal laws and regulations. The principal Federal law governing the management of historically and culturally significant Federal properties is the *National Historic Preservation Act of 1966* (as amended), or NHPA.^{*} The NHPA authorizes the National Park Service (NPS), U.S. Department of the Interior, to establish and maintain a database of significant properties called the National Register of Historic Places[†], and to define criteria for nominating a property to be listed in this database.

In the years since the NHPA first went into effect, various government mandates and tracking procedures have been established or amended to support compliance with portions of the Act. These mandates include both department-specific guidance, such as DoD directives, and general guidance, such as Federal accounting standards for real property. Additionally, various department-specific tools, such as the Army, Navy, and Air Force real property databases have been used (with varying degrees of success) to collect and maintain information on National Register listed and eligible properties.

Over the past decade, the Congress has shown a growing interest in DoD's management of historic buildings and structures. In particular, historic preservation costs have become an issue. These costs continue to rise while operations and maintenance (O&M) budgets decline, prompting the 1995 Marsh Panel on DoD Total

^{*} Public Law 89-665; 16 U.S.C. 470 et seq. The full legal citation, including amendments through 2000, can be viewed at <http://www2.cr.nps.gov/laws/NHPA1966.htm>, including a hyperlink to an NHPA table of contents. An earlier law, the Historic Sites Act of 1935, was a precursor of the NHPA and is discussed as such in Chapter 2.

[†] Referred to alternately in this report as "National Register" in text and "NR" in tables.

Quality of Life to conclude that DoD's housing budget was overburdened by the cost of maintaining historic quarters. In 1996, the Senate Military Construction Committee directed each service to develop a plan to remove all but the "most significant" housing from the National Register (NR).^{*} In 2000, the House Appropriations Committee's Subcommittee on Military Construction directed DoD to develop a report outlining innovative initiatives and future plans to help reduce costs and improve maintenance of historic properties.[†] Finally, the FY01 Defense Authorization Act directed the General Accounting Office (GAO) to review DoD historic properties; the resulting GAO report concluded that the military services lack complete and reliable data on the numbers and costs of historic properties.[‡] The resulting gaps in information may in turn compromise the quality of decisions that are later based on that information.

Despite their general level of power and resolution, Federal data management and accounting tools have not yet achieved an optimal level of uniformity or completeness. However, elements within DoD, including U.S. Army Corps of Engineers (USACE) districts, have begun tracking their historic building and structure inventories using geographic information systems (GISs). A geospatial-referenced database provides an effective and cost-efficient tool for managing data describing significant cultural resources, and it can also greatly facilitate rapid, accurate responses from the field to data calls initiated by the chain of command, higher headquarters, lawmakers, and various state or Federal preservation officials. However, in order to provide consistent and comparable results for use by legislators, policy makers, regulatory officials, and researchers at all levels, a uniform geospatial data model is needed specifically for historic facilities. To best serve DoD and wider government purposes, this data model should be based on the Spatial Data Standard for Facilities, Infrastructure, and Environment/Facility Management Standard for Facilities, Infrastructure, and Environment (SDSFIE/FMSFIE),[§] a nonproprietary suite of GIS and facility management data standards developed and maintained by the CADD/GIS Technology Center within the U.S. Army Engineer Research and Development Center – Information Technology Laboratory (ERDC-ITL). SDSFIE/FMSFIE is available free of cost and is compatible with most major

^{*} Senate Report 104-287 (1996).

[†] House Report 106-614 (2000).

[‡] GAO-01-437 (2001).

[§] For more information, start at <http://tsc.wes.army.mil/products/tssds-tsfmts/tssds/projects/sds/default.asp>.

commercial GIS and computer-aided design and drawing (CADD) software packages. As such, it is used throughout both DoD and the nonmilitary sector.

The ERDC Construction Engineering Research Laboratory (ERDC-CERL) was tasked to co-develop with ERDC-ITL a definitive geospatial data model to include data types that will (1) optimally describe historic facilities in terms that are essential for complete and accurate reporting and (2) function within SDSFIE/FDSFIE.

1.2 Objectives

The primary objectives of this work were to:

- provide a geospatial information management tool for historic buildings and structures
- improve SDSFIE/FMSFIE for management of historic buildings and structures to better provide information needed to comply with the NHPA, report to the Congress, and fulfill other DoD reporting requirements

1.3 Approach

The following tasks were completed:

- Requirements for Federal reporting by DoD on historically and culturally significant buildings and structures were researched. This review covered the NHPA plus key DoD guidance documents that respond to NHPA requirements for properties controlled by the military services, agencies, and field operating activities. Also covered in this review were other Federal mandates and standards that impact real property accountancy requirements for historically and culturally significant facilities.
- Various Federal data dictionaries and models were identified, reviewed, evaluated, and leveraged to achieve uniformity and improve completeness for all DoD historic facility data tracking and reporting purposes.
- The SDSFIE/FMSFIE data model was reviewed and evaluated to determine its current efficacy in satisfying DoD historic facility tracking and reporting mandates.
- Based on the investigations, a new set of data types and definitions was recommended for consideration and inclusion into a future update of the SDSFIE/FMSFIE data model.

1.4 Scope

This report documents research and development for a database schema containing features, attributes, and a domain model of Federal historic facility preservation and geospatial data requirements for incorporation into SDSFIE/ FMSFIE Release 2.20. The study addressed buildings and structures only, excluding other categories of significant properties such as archeological sites. Also, addressing individual state-driven data requirements that exceed the needs of the NHPA were beyond the scope of this Phase I effort.

The term *facility* is used for brevity in the narrative to encompass both buildings and structures.

It is anticipated that the results of this work unit will be applicable to other Federal agencies that are subject to reporting requirements comparable to those for DoD (e.g., the National Aeronautics and Space Administration, Federal Aviation Administration, Department of State).

2 Historic Facility Preservation and Tracking Mandates

This chapter presents a review of historic preservation authority, other historic facility mandates, and related Federal guidance for the purpose of identifying any data requirements for implementation in the current SDSFIE/FMSFIE.

2.1 Federal Preservation Authority

2.1.1 *Historic Sites Act of 1935*

The *Historic Sites Act of 1935* (16 USC 461 – 467) ^{*} sets forth national policy to preserve for public use those resources of national significance for the inspiration and benefit of the United States citizenry. It is an important precursor of the *National Historic Preservation Act of 1966* (as amended) in that it tasks the Department of the Interior — specifically the Secretary of the Interior — with duties intended to preserve the heritage of the United States. As the name of the Act suggests, the duties of the Secretary target the preservation of historic sites, buildings, objects, and antiquities, and include:

- securing, filing, and preserving drawings, plans, photographs, and other data
- surveying for the purposes of determining which resources possess exceptional historical value
- investigating and researching resources to obtain true and accurate facts and information
- acquiring resources for the benefit of the public
- contracting and making cooperative agreements with others to protect, preserve, maintain, or operate worthy resources

^{*} View complete text starting at <http://www.blm.gov/heritage/docum/histsite.pdf>.

- restoring, reconstructing, rehabilitating, preserving, and maintaining resources of national significance (this includes establishing and maintaining museums where desirable)
- erecting and maintaining tablets (historical markers) to commemorate nationally significant places and events
- operating and managing resources for the benefit of the public.*

The Historic Sites Act of 1935 establishes the National Park System Advisory Board and National Park Service Advisory Council. The Board was tasked to advise the Secretary on matters relating to the National Park System and related activities listed above. The Act terminates the Board on 01 January 1995. The Advisory Council provides advice and counsel to the Board.†

The Act also encourages cooperation among governmental and private agencies in advancing its policy. The Historic Sites Act of 1935, however, does not override any State, or further political subdivision, of its jurisdiction over lands acquired by the United States. The Act includes provisions for the establishment of advisory committees and employment of professional and technical assistance as required to accomplish the objectives of the Act. It also sets specific funding authorization limits, and establishes control over conflicting Act(s) related to the same subject matter.‡

After examination of the Historic Sites Act of 1935, the authors find that the only aspects of the Act that apply to the DoD Historic Building/Structure Geospatial Data Standards are the duties of the Secretary of the Interior shown in bullets above. Most of these duties overlap with objectives set forth in the NHPA.

2.1.2 National Historic Preservation Act 1966 (as Amended)

The NHPA builds on general principles set forth in the Historic Sites Act of 1935. Prior to establishment of the NHPA, it became increasingly obvious that historic preservation measures in place were not adequate in preventing frequent loss of or alteration to our Nation's significant historic resources. To ensure future generations a genuine opportunity to appreciate and enjoy our rich cultural heritage, and

* 16 USC 462.

† 16 USC 463.

‡ 16 USC 464 – 467. Services may only be established when Congress appropriates funds or gifts are available for such purpose.

to improve the effectiveness of the earlier legislation, Congress established the NHPA. The Act set out to promote increased knowledge of our historic resources, provide better means to identify and administer them, and encourage their preservation. Of particular interest to DoD is the Act's desire to accelerate Federal preservation programs and activities.^{*} This goal is promoted in NHPA Sections 106 and 110, and DoD generally defers to these sections (over the Historic Sites Act of 1935) for guidance on Federal responsibilities regarding historic buildings and structures.

2.1.2.1 Section 101 – National Register of Historic Places

The National Register of Historic Places (or National Register) is the nation's official list of cultural resources worthy of preservation. Established under Section 101 of the National Historic Preservation Act of 1966, the National Register has identified and documented, in partnership with state, federal, and tribal preservation programs nearly 75,000 districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture. Over one million contributing resources are included in the boundaries of National Register listings. Recognizing a vast and diverse array of historic properties throughout the United States and its territories, the National Register has been a catalyst for preserving communities, maintaining cultural traditions, recognizing community history, and revitalizing cities across the United States. The Register includes landmarks of American achievement as well as properties that reflect the everyday lives of ordinary people in communities across the nation.

National Register properties are distinguished by having been documented and evaluated according to uniform standards. These criteria are designed to help state and local governments, Federal agencies, and others identify important historic and archeological properties worthy of preservation and of consideration in planning and development decisions. The National Park Service — which is part of the U.S. Department of the Interior — administers the National Register.[†]

^{*} *National Historic Preservation Act of 1966* (as amended), 16 USC 470 et seq, Sec. 1. View complete text starting at <http://www2.cr.nps.gov/laws/NHPA1966.htm>

[†] For more information go to <http://www.cr.nps.gov/nr/about.htm> and <http://www.nr.nps.gov/about.htm>.

2.1.2.2 Section 106 – Soliciting Comment on Federal Undertakings

Section 106 of the NHPA requires that a Federal agency take into account the effect of an undertaking on any district, site, building, structure, or object that is listed or eligible for listing on the National Register. It also states that the Federal agency shall afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment with regard to the undertaking.*

For purposes of developing the DoD Historic Building/Structure Geospatial Data Standards, it is important to track DoD buildings and structures that are listed or eligible for listing on the National Register. It is also necessary to track undertakings on these resources. A method for tracking ACHP comments on undertakings is also advisable.

2.1.2.3 Section 110 – Federal Responsibility to Preserve and Use Historic Properties

Section 110 of the NHPA deals with Federal agency program and management issues relating to their historic resources. The following is a list of key agency responsibilities related to historic buildings and structures:

- Before acquiring, constructing, or leasing buildings, use, to the maximum extent feasible, historic properties available to the agency (this accounts for any necessary preservation measures needed to bring the property into use).
- Establish a preservation program to protect and preserve historic properties in consultation with others (e.g. Secretary of the Interior; State Historic Preservation Officer; other Federal, State, and local agencies; and interested parties).
- Establish and carry out a process to identify, evaluate, and nominate historic properties under agency jurisdiction or control.
- Ensure properties listed or eligible for listing on the National Register are managed and maintained to preserve their historic values in compliance with NHPA Section 106 (with special consideration given to preserving such values when properties have National significance).
- Plan for agency actions affecting historic properties not under agency jurisdiction or control.

* NHPA Sec. 106.

- Develop and implement agreements, in consultation with relevant parties and as appropriate, regarding the means by which adverse effects on historic properties will be considered.
- Record historic properties prior to their demolition and deposit such records in the Library of Congress or with other such appropriate agency.
- Designate an agency Federal Preservation Officer (FPO).
- Consistent with agency missions and mandates, conduct agency programs and projects consistent with the NHPA.
- Provide the Secretary a 90-day review period and obtain Secretary approval of plans to transfer surplus Federal historic properties to ensure significant values will be preserved or enhanced.
- Address Federal undertakings affecting National Historic Landmarks by taking actions to minimize harm to such landmarks and providing the ACHP ample opportunity to comment on the undertaking.
- Include costs of preservation activities as eligible project costs in all agency undertakings.
- Waive in whole or in part Section 106 requirements in the event of a major natural disaster or an imminent national security threat.
- Ensure agency will not allow or grant assistance to an applicant who, with the intent of avoiding the requirements of NHPA Section 106, has intentionally significantly adversely affected a historic property to which the assistance relates (unless given agency and ACHP concurrence that circumstances justify granting such assistance despite the adverse effect).
- Document agency NHPA Section 106 decisions related to undertakings that adversely affect NRHP-listed or eligible properties for which no agreement pursuant to ACHP regulations exists (conversely, executed memoranda of agreement govern undertakings).*

2.1.3 DoD Cultural Resource Management Policies

2.1.3.1 DoDD 4710.1 – Archeological and Historic Resource Management

Basic DoD policy on historic facilities is promulgated in Department of Defense Directive (DoDD) 4710.1[†]. The directive addresses policy, procedures, and responsi-

* Ibid. Sec. 110.

[†] DoDD 4710.1, *Archeological and Historic Resource Management* (21 June 1984). View complete text starting at <http://www.dtic.mil/whs/directives/corres/text/d47101p.txt>.

bilities for the management of cultural resources on waters and lands under DoD control, implementing NHPA provisions and related mandates. The policy directs all DoD elements to “integrate the archeologic and historic preservation requirements of applicable laws with the planning and management of activities under DoD control....” Agency responsibilities are to:

- Integrate historic preservation programs into land use plans to reduce adverse effects on significant historic properties.
- Implement a preservation program that provides the resources and technical assistance needed to manage the program effectively.
- Maintain a list of significant archeological and historic properties under DoD control, and a record of the cost of rehabilitation or other treatment, including installation-level inventories and evaluations of all known historic facilities.
- Use available historic properties before acquiring, constructing, or leasing new buildings.
- Locate, inventory, and nominate DoD properties that appear to qualify for the National Register, and ensure that any such property is not inadvertently transferred, sold, demolished, substantially altered, or allowed to significantly deteriorate.
- Communicate with the Department of the Interior on matters concerning nomination to and listing in the National Register as well as any treatment of listed properties.

2.1.3.2 DoDD 4715.1 – Environmental Security

DoDD 4710.1 represents the principal link between the NHPA and DoD policy. A new context for this linkage was formalized with the promulgation of DoDD 4715.1^{*}, which incorporates conservation and restoration of the DoD cultural heritage into environmental security policy. This directive also mandates the “productive use of the corporate information management process”[†], echoing an aspect of accountancy reform that has been underway throughout the Federal Government since the early 1990s (as discussed below under “Accounting Issues and Requirements.”

^{*} DoDD 4715.1, *Environmental Security* (24 February 1996), appendix 1, para I; appendix 2, para 2c. View the full text starting at http://www.dtic.mil/whs/directives/corres/pdf/d47151_022496/d47151p.pdf.

[†] Ibid. para D.11.

2.1.3.3 DoDI 4715.3 – Environmental Conservation Program

Department of Defense Instruction (DoDI) 4715.3, *Environmental Conservation Program*, implements portions of DoDD 4715.1 by integrating the management of all natural and cultural resources on property under DoD control.* Key cultural resource provisions specify that DoD agencies:

- Identify, protect, curate, and interpret DoD-controlled cultural resources through a comprehensive program that complies with legal requirements and results in sound and responsible stewardship.
- Develop a program to preserve the historic character and function of military properties in a cost-effective way that supports the military mission and protects human health and safety.
- Prepare, maintain, and implement Integrated Cultural Resource Management Plans (ICRMPs) for all lands containing cultural resources.
- Evaluate all properties, including Cold War era properties, in a manner fully consistent with military mission requirements using NHPA criteria to determine eligibility for nomination to the National Register.
- Use all National Register eligible properties for mission purposes to the maximum extent possible before acquiring, constructing, or leasing other buildings.
- Conduct an economic analysis, to include life-cycle maintenance costs, utility costs, replacement costs, etc., of all National Register eligible historic properties being considered for demolition and replacement.

DoDI 4715.3 specifies that a National Register eligible building or structure may be replaced if revitalization would exceed 70 percent of the facility replacement cost. However, it also allows for spending more than 70 percent of replacement cost to revitalize a facility when its significance warrants special attention or when justified by long-term life-cycle cost comparisons. The language also specifies that any replacement design for a historic facility shall be historically compatible with the property.

Based on the requirements of this DoD mandate, it would be useful to establish geospatial data types to clearly establish economic analysis status.

* View full text starting at http://www.dtic.mil/whs/directives/corres/pdf/i47153_050396/i47153p.pdf.

2.1.3.4 DoDI 4165.14 – Inventory of Real Property

This DoD real property tracking mandate includes passages that direct all DoD headquarters, agencies, and field operating activities to maintain an accurate inventory of their *heritage assets*, which are defined to include facilities that have historical, cultural, or architectural significance. DoDI 4165.14 requires a 100 percent physical inventory of such property once every 3 years to ensure that real property records accurately reflect assets in the field. Included in the required annual report is a data table intended specifically to track heritage assets through the assignment of a Facility Historical Action Code as follows:

- A – included in the National Register
- B – eligible for inclusion in the National Register
- C – not evaluated for eligibility for the National Register
- E – is a National Historic Landmark or part of a historic district
- Z – not historic in nature.

This Facility Historical Action Code provides only one data point on heritage assets, and code value could easily be determined through a query of pertinent data fields selected for inclusion in Table 1. However, DoDI 4165.14 also addresses numerous general data requirements related to real property acquisition, disposal, excessing, and leasing, and many of these may be important for tracking proposed undertakings on facilities subject to NHPA rules. Accordingly, the geospatial database should incorporate fields to accommodate these requirements and exploit relevant data already being collected for other purposes.

See page 19 for additional information on DoDI 4165.14.

2.2 Accounting Issues and Requirements

2.2.1 Introduction

The collection and maintenance of data on DoD's physical inventory of NHPA listed and eligible properties is governed not only by the cultural resource mandates discussed above, but is significantly impacted by Federal accounting policies, concepts, and standards. This section summarizes the principal controlling philosophies and processes. It also includes discussion of a General Accounting Office report to Congress that has identified areas to target for improvement in relation to DoD methods for tracking historic facility maintenance and repair (M&R) costs.

2.2.2 The Chief Financial Officers Act of 1990

The Chief Financial Officers Act of 1990, Public Law 101-576^{*}, includes no explicit references to the NHPA, cultural resources, or historic facilities. The effect it has on these activities, however, is significant and systemic. Basically, the Act serves as the point of departure for sweeping long-term financial management reforms throughout the Federal government. The purposes of the law are to:

- Bring more effective general and financial management practices to the Federal government.
- Spur improvement of accounting systems, financial management systems, and internal controls to deter fraud, waste, and abuse of government resources.
- Provide for the production of complete, reliable, timely, and consistent financial information for use in financing, managing, and evaluating Federal programs.

The Act establishes within the Office of Management and Budget (OMB) the position of Deputy Director for Management. This position is the Federal government's chief financial management official, and its responsibilities include property management[†]. The Act also assigns to Agency-level CFOs the responsibility for implementing agency asset management systems, including property and inventory management controls for documenting property acquisition, use, and disposal.

Taken on its face, the CFO Act presents no specific requirements related to historic facilities. Nevertheless, the Act creates a strong mandate for improving and eliminating duplication in information systems used for property tracking in general.

2.2.3 Statements of Federal Financial Accounting Standards (SFFAS)

This is a body of guidance published by the Federal Accounting Standards Advisory Board (FASAB). SFFAS No. 6 and No. 8 are of interest in developing a geospatial data model for historically and culturally significant properties.

^{*} View the text for this document starting at <http://www.dfas.mil/technology/pal/regs/cfo-act.pdf>.

[†] PL 101-576, sec 202(b).

SFFAS No. 6 comprises accounting standards for all Federally owned property, plant, and equipment (PP&E).^{*} Paragraph C addresses *heritage assets*, which are defined as PP&E “possessing significant educational, cultural, or natural characteristics.” Heritage assets are generally expected to be preserved indefinitely, and typically are listed in or eligible for the National Register. A premise of SFFAS No. 6 is that financial reporting “can fulfill the stewardship objective” if it includes information on asset condition, changes in the amount and service potential of assets, cost (where applicable), and spending for acquisition versus non-capital spending.[†] For *multi-use heritage assets* (i.e., those used for everyday government operations in addition to their heritage preservation function), maintenance costs supporting continued use of the asset for government operations are to be accounted for separately from maintenance expenses solely intended to preserve the property’s heritage features.

Because the large majority of DoD historic facilities are multi-use heritage assets, it would be highly useful for SDSFIE/FDSFIE to include a data type indicating whether a maintenance cost is intended to preserve heritage features or to support daily government occupation or operations.

SFFAS No. 6 also acknowledges that, because various non-financial measures of performance are often crucial in reporting on heritage asset management, *supplementary stewardship reporting* is required to answer basic questions of public interest, such as:

- What are the most important assets?
- Where are they located?
- How effective is government stewardship?

SFFAS No. 8, *Supplementary Stewardship Reporting*, promulgates standards for such reporting.[‡] General examples of information recommended for inclusion in supplementary stewardship reporting include:

^{*} View complete text of SFFAS No. 6 starting at <http://www.fasab.gov/pdf/sffas-6.pdf>.

[†] SFFAS No. 6, para 12.

[‡] View complete text of SFFAS No. 8 starting at <http://www.fasab.gov/pdf/sffas-8.pdf>.

- asset category
- number of physical units added and withdrawn from heritage asset records during the reporting period
- description of methods for acquisition and withdrawal
- condition, including standardized rating codes and percentages of assets above, at, or below acceptable condition.

More detail on supplementary stewardship reporting, presented in the context of DoD financial management regulations, is presented in the next section.

2.2.4 DoD 7000.14-R – Financial Management Regulations, Volume 6B, Chapter 11

This portion of the omnibus DoD Financial Management Regulations^{*} includes implementation of an OMB directive that DoD agencies report Required Supplementary Stewardship Information (RSSI) on an annual basis. The relevant passages of this regulation address RSSI reporting for purposes of tracking the classification, quantities, and general condition of DoD Heritage Assets, which comprise five different categories of historically, culturally, and architecturally significant property. National Register listed or eligible facilities are accounted for under one of the following three DoD heritage asset reporting categories:

- *Buildings and Structures*, which includes National Register listed and eligible properties except for those used primarily as museums.
- *Museums*, buildings largely dedicated to use as a museum and which also may be National Register listed or eligible.
- *Monuments and Memorials*, which may include listed or eligible structures as part of their overall infrastructure.

Of these three relevant heritage asset categories, Buildings and Structures introduces no data requirements that are not addressed under NHPA. Regarding the other two categories, however, it would be useful to establish data types indicating (1) whether a National Register listed or eligible building is a museum and (2) whether a listed or eligible structure is part of a monument or memorial.

^{*} View text of Chapter 11 starting at <http://www.dtic.mil/comptroller/fmr/06b/06B11.pdf>.

2.2.5 General Accounting Office Report GAO-01-437

As part of the FY01 Defense Authorization Act, the GAO was directed by the Congress to review historic properties controlled by DoD and assess current and projected inventories as well as their associated maintenance and repair (M&R) costs. The assessment specifically addressed buildings and structures, which according to GAO are “the predominant types of historic properties in the Department of Defense.”* The report on this GAO study, *Military Services Lack Reliable Data on Historic Properties*, concluded that the military services do not have complete or reliable data on the number of historic properties they control. Several reasons identified were:

- lack of a centralized real property database covering all the military services
- inconsistencies between the services’ real property databases and their own cultural resource records
- lack of reporting on the number of facilities eligible for the National Register, with most of the data primarily documenting listed facilities only.

One difficulty identified by GAO was that although the number of DoD facilities soon reaching 50 years of age can be projected from the services’ real property databases, there is no way to project what percentage of these Cold War era facilities may meet NHPA criteria and become eligible for the National Register. Consequently, there is no basis for projecting future costs for revitalization and M&R of historic facilities.

A more fundamental difficulty in cost accounting was, according to the report, that the services do not either account centrally for or otherwise distinguish between M&R dollars spent on historic properties versus nonhistoric properties. Therefore, GAO could not obtain data suitable for conducting any composite cost analysis related to M&R for DoD historic facilities. Qualitative information provided by military cultural resource officials indicated that the cost of day-to-day maintenance for historic properties is similar to the cost for nonhistoric properties. However, GAO found that M&R costs for historic facilities can be proportionally higher for historic properties that:

* GAO-01-437 (April 2002), p 1. View full text of this report at http://web.dandp.com/enviroweb/cultural/PDF/GAO-01-437_historic_properties.pdf.

- are larger than current military requirements specify for a given type of construction
- require replacement of unique historic features such as large porches, special windows, or high-quality materials such as slate, tile, and copper.

GAO noted that such higher costs typically were incurred only in the year the improvement was made, but that these higher first costs often translated into life-cycle costs that were comparable to typical M&R methods and materials. However, no composite analysis could be done due to lack of consolidated department-wide data.

The report concludes with a recommendation to the Secretary of Defense that the military services “update their real property databases to ensure an accurate inventory of properties that are listed and eligible for listing on the National Register of Historic Places.”^{*} Speaking for DoD in a March 2001 letter to GAO, which is reprinted as an appendix to the report, the Under Secretary of Defense for Installations concurred with the report’s recommendations and stated that work was then already underway to improve the accuracy and reliability of real property databases, “to include data fields that will identify historic properties as recommended....”

The GAO report acknowledges that various inventory reporting mechanisms for National Register listed and eligible facilities are already in place, and therefore it implies no need for new or unique data types related to documenting inventory numbers and types. However, the text strongly indicates that a geospatial database for historic facilities would greatly benefit from the inclusion of data types related to M&R cost accounting, especially in terms of:

- recording accurate M&R expenditure totals per facility
- distinguishing M&R costs for historic facilities from M&R costs for nonhistoric facilities
- indicating whether a facility cost represents routine M&R, cyclic M&R, or a capital improvement that should be accounted for separately.

^{*} GAO-01-437, p 12.

2.3 Summary of Data Requirements for Meeting Historic Facility Mandates

Appendix A presents a matrix summarizing data requirements that are recommended for consideration and incorporation into the SDSFIE/FDSFIE definitive historic facility data model in order to support tracking of historically and culturally significant facilities. Pertinent data, data definitions, and data types appear in the three left-hand columns of the matrix. The four right-hand columns indicate any laws or other mandates that correspond to the proposed data field; these mandates fall under the four general headings of (1) preservation, (2) systems, (3) real property and cultural, and (4) financial. The applicable mandate is indicated in the appropriate column or columns.

3 Real Property Tracking Mechanisms and Data Models

3.1 Federal Property Tracking Mechanisms

3.1.1 Introduction

The main purpose of DoDI 4165.14, previously discussed on page 12, is to implement policy promulgated in Titles 10 and 40 of U.S. Code, Executive Order 12512, and several DoD mandates (including DoD 7000.14-R). DoDI 4165.14 directs all DoD headquarters, agencies, and field operating activities to maintain a Real Property Inventory (RPI) for all unclassified land and facilities in which they have a real estate interest. This requirement is met in part through the maintenance of real property tracking databases by the Army, Navy, and Air Force.

3.1.2 Service Real Property Databases

3.1.2.1 Army Integrated Facilities System (IFS)

The Integrated Facilities System (IFS) is a Department of the Army (DA) approved Standard Army Management Information System (STAMIS) that has supported the Directorate of Public Works (DPW) community since 1976. The IFS customer base consists of more than 100 Army installations worldwide, Defense Logistics Agency (DLA) installations, and 16 Army Reserve Centers. IFS addresses the DPW business functions of Real Property, Work Management, Job Cost Accounting, Work Estimating, Supply and Contract Administration. While IFS is basically an installation business system, it provides upward reporting of common business and performance information to Major Command (MACOM) and DA levels. The Army Chief of Staff for Installation Management (ACSIM) is the proponent for the IFS system.

There are two data elements within the *Heritage Asset Table* in the Army's IFS that relate to historic buildings and structures: *Heritage Asset Code* and *Heritage Asset Description*. Relevant table data and data element abbreviations, definitions, length, format, value, and descriptions are shown below. The terms *heritage* and

mission relate to multi-use heritage assets as defined in the DoD Financial Management Regulation, Vol. 6B, Chapter 11 and the Statement of Federal Financial Accounting Standards No. 6.

NAME: Heritage Asset [HERITAGE_ASSET]

DEFINITION: This is a domain table that is used to validate the entry of Heritage Asset Code on the CFO Project Information Screen.

REMARKS: Broadcast table; cannot be modified by user.

NAME: Heritage Asset Code [HERITAGE_ASSET_CD]

DEFINITION: A value which categorizes a facility as being a specific type of heritage asset for financial asset reporting purposes.

LENGTH: 1

FORMAT: ALPHANUMERIC

VALUE: DESCRIPTION:

1	Buildings
2	Structures
3	Monuments
9	Museums
A	Buildings - Heritage and Mission
B	Structures - Heritage and Mission
C	Memorials, Monuments - Heritage and Mission
E	Museums - Heritage and Mission

NAME: Heritage Asset Description [HERITAGE_ASSET_DESC]

DEFINITION: The definition of a specific instance of Heritage Asset Code.

LENGTH: 40

FORMAT: ALPHANUMERIC

REMARKS: See HERITAGE_ASSET_CD for valid values.

3.1.2.2 Internet Navy Facility Assets Data Store (iNFADS)

The Internet Navy Facility Assets Data Store (iNFADS) is an integrated web-based system used to support Navy shore facility assets on a worldwide basis. It is the official database for Navy real property and is comprised of the following components:

- Navy Facility Assets (NFA), repository of Navy and Marine Corps information on buildings, structures, land, and utilities as related to the areas of acquisition, construction, utilization, and disposals.
- Master Activity General Information Control (MAGIC) provides activity related information by Unit Identification Code (UIC).
- Cost Category Directory (CCD), consists of all valid category codes within the Navy and Marine Corps.

Information for cyclical data calls regarding Navy and Marine Corps *non-collections* heritage assets are gathered and maintained with the centrally managed iNFADS tool. Relevant data on historic buildings, structures, monuments, and memorials are tracked by populating the revised iNFADS Data Element 410 (Historic Indicator) and 410 sub-elements a/b/c/d as shown below. In all data elements except 410c, “No Data” may be chosen as a placeholder indicating that no entry has yet been chosen. “No Data” may also indicate interim identification.

NFA DATA ELEMENT NO. 410

NAME: HERITAGE ASSET

DEFINITION: A “Heritage Asset” (HA) is any item that is unique for one or more of the following reasons: historic or natural significance; cultural, educational, or artistic importance; or significant architectural characteristics. The determining factor for items in the NFADB that may be Heritage Assets is eligibility for or listing on the National Register of Historic Places. Heritage Asset data consisted of one field (Historic Indicator (410)) and has now been expanded to include six fields to collect data that satisfies DON Heritage Asset’s reporting requirements.

The NFADB will be used to collect data on only those Heritage Assets (real property) that should already be recorded in the NFADB, namely buildings, structures, monuments/memorials, sites, and cemeteries. Any DON controlled or owned building, structure, monument/memorial, or cemetery that meets the criteria for eligibility or listing on the National Register of Historic Places is automatically considered a Heritage Asset and shall be so noted in this and the subsequent fields. Heritage assets include are either parcels of land, buildings (single or multi-use), structures

(single or multi-use), monuments/memorials, or cemeteries. The vast majority of HA buildings/structures are multi-use. The last item ("10" is a clarifier, to be used when other historical data fields are filled and there may be doubt about HA status. Check only one of the options in this field. Multi-use refers to buildings and structures that are used for governmental functions, such as office space, storage, etc. Vacant buildings and structures are NOT considered multi-use. Also, if a Heritage Asset is used primarily for visitation, exhibition, and education, then it is NOT considered multi-use. Buildings and structures need not be in direct DON custody to qualify for reporting.

LENGTH: 1

FORMAT: ALPHANUMERIC

VALUE: DESCRIPTION:

- | | |
|----|---------------------------|
| 1 | Building (non-multi-use) |
| 2 | Multi-use building |
| 3 | Structure (non-multi-use) |
| 4 | Multi-use structure |
| 5 | Monument/memorial |
| 7 | Not a heritage asset |
| 10 | No Data |

NFADB DATA ELEMENT NO. 410a

NAME: NATIONAL REGISTER CATEGORY

DEFINITION: After defining items according to the appropriate Heritage Asset terminology, DON must record an item's appropriate National Register Category. Every item will be defined as a building, structure, site, or object, including whether each stands alone or contributes to a historic district. If a property is a Heritage Asset, then its relevant National Register information must be indicated also. In other words, a property is EITHER 1) a Heritage Asset and eligible for/listed on the National Register OR 2) is not a Heritage Asset nor eligible for/listed on the National Register. The NFADB should never show that a Heritage Asset is 'ineligible' for the National Register of Historic Places. If National Register Category is set to 'Non-contributing element in a historic district' (9), the 'Heritage Asset' field must be set to 'Not a Heritage Asset' (7). It's useful to note non-contributing resources, as work on these buildings might trigger National Historic Preservation Act (NHPA), Section 106 consultation for neighboring National Register eligible/listed assets.

LENGTH: 1

FORMAT: NUMERIC

DESCRIPTION:

Building (stand alone)

Structure (stand alone)

Building (contributing resource in a historic district)

Structure (contributing resource in a historic district)

Non-contributing element in a historic district

No Data

NFADB DATA ELEMENT NO. 410b

NAME: NATIONAL REGISTER DETERMINATION

DEFINITION: National Register Determination method indicates EITHER how the property was listed OR how it was determined eligible. Any National Historic Landmark is automatically listed on the National Register. For other historically significant items, they may be listed on the National Register or have been determined eligible either by the Keeper of the National Register or by consensus between the Navy and the State Historic Preservation Officer (SHPO). The distinction between “listed” and “eligible” is made because of the requirement to document eligibility. Listed or Keeper-eligible properties have documentation at the National Register of Historic Places Headquarters. Consensus-eligible properties are documented locally. Options (6-11) indicate properties that are no longer listed on nor eligible for listing on the National Register, for various reasons. It is necessary to include these fields to document properties as their Heritage Asset status changes. Typically, these indicators would be used to reflect a Property whose Heritage Asset status has been lost. If National Register Determination is set to 6 – 11, the 'Heritage Asset' field must be set to 'Not a Heritage Asset' (7).

LENGTH: 1

FORMAT: NUMERIC

VALUE: DESCRIPTION:

- | | |
|---|---|
| 1 | National Historic Landmark |
| 2 | Listed on the National Register (NR) |
| 3 | Determined eligible for NR by Keeper |
| 4 | Determined eligible for NR by consensus |

- 5 Determined ineligible for the NR by consensus/keeper
- 6* Unevaluated
- 7* Delisted as National Historic Landmark
- 8* Delisted from the National Register
- 9* Former NR-eligible site now ineligible
- 10* NHL/NR property formerly here (i.e., demolished)
- 11* NR eligible property formerly here (i.e., demolished)
- 12 No Data
- 13 Treated as eligible by Navy, pending formal determination of eligibility

NFADB DATA ELEMENT NO. 410c

NAME: NATIONAL REGISTER DETERMINATION DATE

DEFINITION: National Register Determination Date is a user-generated date that indicates when the National Register eligibility/listing was determined. This is a user-optional field however, when filled in, the 'National Register Determination' field must also be completed.

LENGTH: 8

FORMAT: NUMERIC

The first 2 digits must be the day, followed by the three-character month abbreviation, followed by the 4-digit year. Example: 23 JAN 2002.

Also contains a free-text field *National Register status remarks* that may be used to cite eligibility-conferring documents like ICRMPs.

NFADB DATA ELEMENT NO. 410d

NAME: RELATIVE HISTORIC SIGNIFICANCE INDICATOR

DEFINITION: The Relative Historic Significance Indicator reflects the category and priority level to which a cultural resource has been assigned. This process de-

* These Class 1 and Class 2 properties are not Heritage Assets and should be entered as 7 in the Heritage Asset field.

termines the Navy's 'most significant' cultural resources. For instance, Category I, Priority I reflects those historically significant resources that retain the highest degree of integrity, contextual value, or architectural value. Category I, Priorities II and III indicate successively lower levels of integrity, contextual value, or architectural value, yet resources with these designations are still eligible for listing on the National Register of Historic Places. Category II resources are those that do not qualify for listing on the National Register of Historic Places. The Categorization/Prioritization protocol is located in ICRMP Guidance as well as the Navy's Nation-Wide Historic Family Housing Programmatic Agreement. While it is mandatory for all historic housing units to be categorized and prioritized according to this protocol, it is optional for other cultural resources. If the Relative Historic Significance Indicator field is set to 'Category II', the following edits are in place:

Heritage Asset field must be set to 7 or space

National Register Category must be 9, 10, or space

National Register Determination cannot be 1-4 or 13.

If historically significant resources have been previously categorized according to the Navy's HARP guidelines, use the code translations listed below:

HARP ICRMP

Category I	Category I, Priority I
Category II	Category I, Priority II
Category III	Category I, Priority III
Category IV	Category II

LENGTH: 1

FORMAT: NUMERIC

VALUE: DESCRIPTION:

1	Category I, Priority I
2	Category I, Priority II
3	Category I, Priority III
4	Category II

3.1.2.3 Air Force Automated Civil Engineering System–Real Property (ACES-RP)

The Automated Civil Engineering System–Real Property (ACES-RP) is the automated system providing Real Property information management support to active

Air Force, Air Force National Guard, and Air Force Reserve units during peace and war, at fixed main bases, bare bases, and deployed bases. There are six real property data elements relating to heritage assets, and all but one (reporting to the major command (MAJCOM)) are listed as optional.

TABLE: FACILITIES

COLUMN: HERITAGE_REFERENCE

DEFINITION: Documents the Historical Register entry that makes a facility a heritage asset (optional).

LENGTH: 8

FORMAT: VARCHAR2

TABLE: FACILITY_DELETE

COLUMN: HERITAGE_REFERENCE

DEFINITION: Documents the Historical Register entry that makes a facility a heritage asset (optional).

LENGTH: 8

FORMAT: VARCHAR2

TABLE: MAJCOM_SUBMITTALS

COLUMN: HERITAGE_REFERENCE

DEFINITION: Documents the Historical Register entry that makes a facility a heritage asset.

LENGTH: 20

FORMAT: VARCHAR2

TABLE: FACILITIES

COLUMN: HERITAGE_YN

DEFINITION: This checkbox when checked indicates the facility is a Heritage Asset (optional).

LENGTH: 1

FORMAT: VARCHAR2

TABLE: FACILITY_DELETE

COLUMN: HERITAGE_YN

DEFINITION: This checkbox when checked indicates the facility is a Heritage Asset (optional).

LENGTH: 1

FORMAT: VARCHAR2

TABLE: MAJCOM_SUBMITTALS

COLUMN: HERITAGE_YN

DEFINITION: This checkbox when checked indicates the facility is a Heritage asset (optional).

LENGTH: 1

FORMAT: VARCHAR2

3.2 Federal Data Dictionaries and Models

This section presents a review of Federal data dictionaries and models for the purpose of evaluating what they may contribute to a definitive historical facility data model for all of DoD.

3.2.1 *Air Force Model*

The Air Force Model was developed out of a need by the Air Combat Command (ACC) to share cultural resource data across bases, commands, service headquarters, and non-DoD organizations. The resulting data model^{*} and database target base-level cultural resource management. To ensure data compatibility across all services the data model and database are designed to comply with Tri-Service Spatial Data Standards (TSSDS)[†], Federal Geographic Data Committee (FGDC) guidance, and Defense Environmental Security Corporate Information Management (DESCIM) guidance. The model seeks to incorporate preexisting ('legacy') cultural resource data with new, more universally accepted data, such as FGDC-compliant data.

The database stores spatial data and non-spatial data about a variety of cultural resources. Included in the database are data tables relating to:

- historic resources (i.e., archeology, structures, aircraft)
- environment (i.e., soil, water, vegetation)
- context (i.e., cultural affiliation, function, temporal component)
- artifacts (i.e., bone, glass, ceramics)
- documentation (i.e., reports, articles, field notes)
- location (i.e., Latlong, UTM, PLSS)
- management (i.e., NRHP Status, Violators, Probability Zones)
- events/studies (i.e., resource history, surveys, undertakings).

3.2.2 *Fort Benning/Army Model*

Fort Benning tracks historic buildings and structures in relation to their eligibility. They utilize the Environmental Systems Research Institute (ESRI) ArcGIS geographic information system (GIS) platform for this purpose. The information is organized in shapefile format to include the location of the building or structure and its eligibility designation, Eligible, Non-Eligible or Historic. To the best of their abil-

^{*} Functional Specifications Document Contract F44650-94-D0005, Delivery Order 5027 – Cultural Resources Geospatial Data Integration, prepared for HQ ACC/CEVP Langley AFB, Virginia, by Parsons Engineering Science, Inc. and Loyola Enterprises, Inc. (March 2000.) To view the entire specification, download a copy from http://tsc.wes.army.mil/contacts/groups/FWG/Natural-Cultural/edit/proposed_cultural_entity_set.htm by right-clicking the first link on that web page.

[†] Tri-Service Spatial Data Standard was the predecessor of the SDSFIE/FMSFIE.

ity Fort Benning complies with the SDSFIE data model in the collection and arrangement of their GIS data. It is a standing requirement that all contractors at Fort Benning who supply cultural resource GIS data prepare and present that data in compliance with SDSFIE standards. Fort Benning also collects GIS data on historic districts and historic open spaces. Of special note is Fort Benning's creation of a separate GIS data set to address only those buildings and structures that are part of the Capehart-Wherry housing program. Due to the Army's new programmatic agreement focusing on Capehart-Wherry housing, having a separate GIS data layer specific to this purpose will streamline management and reporting for these structures.

3.2.3 National Park Service List of Classified Structures Model

The NPS List of Classified Structures (LCS) is an inventory of all historic and pre-historic structures that have historical, architectural, and/or engineering significance within jurisdiction of NPS.* The LCS includes but is not limited to buildings, monuments, dams, canals, nautical vessels, bridges, tunnels, roads, railroad locomotives, track, fences, defensive works, temple mounds, outdoor sculptures, and ruins of all types that still maintain some degree of structural integrity.

The list has been 'classified' (i.e., evaluated) according to the criteria set by the National Register of Historic Places. An LCS structure must serve as contributing elements of places or districts that meet these standards, and must be managed as a Cultural Resource by decree of law, or policy. A number of structures that have been relocated and reconstructed are elements of the LCS. Both commemorative structures and structures that have been deemed culturally significant within the last 50 years are also included in the LCS, because they meet National Register standards. Even though structures in the LCS are assessed by these criteria, however, the LCS is not a subset of the National Register. The LCS and the National Register serve different purposes, and contain different information.

From its early days in the 1960s, the LCS has grown from a list of recommendations made at a meeting of NPS regional directors into a client-server, web-based application that is accessible to a much wider audience, and serves as a powerful, user-friendly management tool. The LCS contains four general types of information in each record: identification data, historical information, management data, and bib-

* For more information go to <http://www.nps.gov/ncro/lrp/lcs.htm>.

liographic reference data. The LCS is an automated database, and as such, it facilitates information retrieval. This, in turn, aids park managers and cultural resources personnel in making management decisions. The LCS has evolved into a powerful research tool, not only assisting NPS staff, but historical scholars, and the general public as well.

3.2.4 National Register Information System Model

The National Register Information System (NRIS) is a database of information about places listed on or determined eligible for the National Register of Historic Places. This computerized index to the nation's historic places, based upon a more complete paper record housed in Washington, DC, provides descriptive fields about each property. Currently, the user can search by name, architect, significant person, multiple property submission names, location, Federal agency, or any of a number of themes used to organize Web pages.

Nearly 75,000 National Register listings populate the NRIS. Included among these are:

- all historic areas in the National Park System
- more than 2300 National Historic Landmarks that have been designated by the Secretary of the Interior because of their importance to all Americans
- properties across the country that have been nominated by governments, organizations, and individuals because they are significant to the nation, to a state, or to a community.*

3.3 Summary of Relevant Content From Federal Data Models

Appendix B presents a matrix summarizing data types and definitions, now available in Federal data models, that could meet the information requirements identified in Chapter 2. The two left-hand columns in the matrix, which are identical to the matrix in Appendix A, specify the data types and definitions that would be useful to incorporate into the definitive geospatial historic facilities data model. The other five columns show which Federal data models were evaluated and whether

* For more information go to <http://www.cr.nps.gov/nr/about.htm> and <http://www.nr.nps.gov/about.htm>. Full text versions of National Register nominations are not currently available.

they include a data type relevant to current project requirements. In cases where there is a match between data type availability and project requirements, the field name for that data type is filled into the appropriate matrix cell. Note that the matrix also reflects the authors' analysis of existing SDSFIE/FMSFIE data types. The detailed results of that analysis are presented in the next chapter.

4 SDSFIE/FMSFIE Release 2.20 Model

This chapter summarizes the current SDSFIE and discusses its efficacy for satisfying DoD historic building and structure mandates.

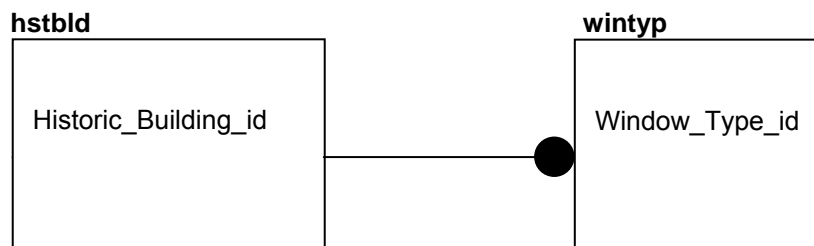
4.1 Pertinent Database Concepts

In order to understand the data structure inherent in the SDSFIE cultural resource data models, one must first understand some database fundamentals. A database is a collection of electronically stored, inter-related information that serves the data needs of an organization or associated organizations. The form a database takes is determined by the database management system (DBMS) employed to organize the data. A DBMS is a computer program that maintains and implements a database allowing the user to save, retrieve, and modify information contained in the database. Examples of a DBMS include Oracle, SQL Server and a number of other commercially available software packages.

Database management systems structure data according to a specific type of data model. Data model types include relational, hierarchical, network, object oriented and flat file models. The most widely accepted data model type is the relational data model. In relational data models, the actual data are independent of one another so that the structure of the database can be modified without requiring the applications using the data to be reprogrammed. The SDSFIE cultural resource data models are relational database models. They provide a logical representation of a database structure showing all the data and the relationships between that data.

Logical representations of database structure are independent of hardware considerations. They can therefore be applied to any DBMS system. The data models represented in the SDSFIE/FMSFIE 2.20 browser utilize entity relationship (ER) diagrams to depict logical database structures that represent real-world activities and objects. The ER diagram describes entities, attributes, and relationships. An **entity** can be thought of as a single item about which information can be stored. An entity can represent a physical object, such as a historic building. In an ER diagram, an entity table is represented as a rectangular box. An entity's name (and

therefore the title of the entity table) is written just above the box as illustrated in the following figure:



“**hstbld**” and “**wintyp**” are examples of different entities. These names are short for “historic building” and “window type” respectively. An entity manifests itself physically as a row in a database table. Entities are associated with each other through **relationships**.

As mentioned previously, entities and their interrelationships are modeled in an ER diagram. A line drawn between two entity tables illustrates a relationship, as seen in the example above. Relationships can be described as one-to-one, one-to-many or many-to-many. In simple terms, this means that one entity can be described by one other entity; one entity can be described by many entities, or many entities can be described by many entities. Again using the diagram above as an example, a historic building can have one window type, a historic building can have one or more window types, or many historic buildings can have many window types. The SDSFIE cultural resource data models use the IDEF1X standard of notation to represent these relationships in their ER diagrams. This system of notation can be interpreted as follows:



The data associated to an entity is known as an **attribute**. The database schema associates one or more attributes with each entity in a table. This table, therefore, defines the entity. Attributes can be expressed in terms of text (character) values, integer (number) values, a date value or a floating-point number value. In the Historic Building example, an attribute could be its construction date, or its area expressed in square feet.

A full set of ER diagrams for the SDSFIE Cultural Resource Entity Sets can be viewed by downloading the SDSFIE/FMSFIE 2.20 data models from the CADD/GIS Technology Center website at:

<http://tsc.wes.army.mil/products/tssds-tsfs/tssds/idef1x/tssds.asp>

For additional information on database concepts for the Spatial Data Standards and Facility Management Standards for Facilities, Infrastructure, and Environment, a full report can found on the CADD/GIS Technology center's website at:

<http://tsc.wes.army.mil/products/tssds-tsfs/tssds/articles/papers/sdsfmsm210.htm>

4.2 Historic Building SDSFIE/FMSFIE Parent-Child Table Relationships

This section describes those tables that are associated with historic buildings. The tables are organized to illustrate parent entity and child entity relationships. A parent entity table is the uppermost data table in a data hierarchy. Parent entity tables form the basis for the attributes that describe the core elements of the entity. The parent entity can then be further described by associated attributes in child entity tables. Through parent child relationships data is grouped specific to the entity it describes allowing for the data to be organized in its least redundant form. To form the relationship between the parent and child table the **primary key** of the parent table is incorporated into the child table as a **foreign key**. In the parent table the primary key acts as a unique identifier for each record in the table. In the child table as the foreign key it acts as the linking field between the records in the parent and child tables.

Note that whenever the letter "_u_" is included in the middle of the attribute name the domain table for that attribute refers to the *units of measure* domain table. This domain table is the same for any attribute that includes this naming convention.

Table Name: **bggenstr** – buildings, general structure

Definition: This table contains data about man-made structures that were created to protect man and possessions from the environment; or to enhance man's activities.

Join Relationships: **Cultural Resource Child Tables to Parent (bggenstr)**

In addition to a building being described by all the data attributes in the building general structure table (bggenstr), a building is further described by all data attributes in its associated child tables.

crhststr — cultural historic structure table

crgenchr — historic characteristics structures table

crgenhst — chronology of historically significant items table

crhstfet — historic features table

crarcsit - archeological site data table. (Not included - related to archeology)

All Parent Tables to Child bggenstr

The data contained in child tables can be directly queried by associated parent tables.

crhstdst — This table contains data about historic districts.

cmgenadd — This table contains information about addresses.

cddoins — This table contains data about Department of Defense Installations.

cmgenprd — This table describes the positional location of points and nodes.

cmgenfac — Real property, having a specified use, that is built or maintained by people.

cmgenmap — This table contains information about digital and analog maps.

cmgenmet — This table contains attribute table level metadata, data about the attribute data which identifies items like who collected the data, when it was collected, and the accuracy of the data.

cmgenown — A person, organization, or agency with legal control or management responsibility for an object or place

cmmedmed — This table contains information about any external image, graphic, cad file, or other representation of the feature.

hysurcrs — This table contains data about surface water courses.

lscndlus — This table contains data about special land use.

trrrdsta — This table contains information about designated areas where a train will stop to pick up or discharge passengers or freight.

trvehwei — This table contains information about weigh station areas.

Table 1. Parent table BGGENSTR – buildings, general structure.

bggenstr :	(Buildings, General, Structure) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
building_id	(PK) Identifier. A unique operator generated alphanumeric identifier assigned to a facility within an installation for identification throughout its life cycle.	NA
datalink	Unique Data Identifier Graphic Key. This attribute normally contains a linking key to an external graphic element. In some systems, this key is managed and populated by the GIS. Care should be taken in modifying this field manually. This is NOT the table's (PK).	NA
map_id	(FK) JOIN to cmgenmap. Used to link the record to the appropriate map.	NA
meta_id	(FK) JOIN to cmgenmet. Used to link the record to the applicable feature level metadata record(s).	NA
media_id	(FK) JOIN to cmmedmed. Used to link the record to associated multimedia records that reference data such as imagery, video, audio, scanned documents, drawings, and other digital media.	NA
coord_id	(FK) JOIN to cmgencrd. Used to link the record to the appropriate point coordinate record(s).	NA
structname	Common Name. Common name given to the structure	NA
str_stat_d	Status Code Discriminator. This value differentiates structure entities by operational status.	DEMOLITION, EXISTING, PERMANENT, PORTABLE, SEMI_PERM, TEMPORARY
towr_use_d	Tower Use Code Discriminator. This value differentiates tower structure entities by operational use.	CONTROL, FIRE, OBSERVATION
str_type_d	Type Code The type of structure.	APARTMENT, BARN, CHURCH, COND0
str_use_d	Use Code. The present use of the structure.	ABANDONED, AGRICULTURE, CAPITOL, COURTHOUSE
str_cnd_d	Condition Code. The condition of the structure.	CRACKED, DAMAGED, CONDEMED
designcode	Design Code. Department of Defense as-designed structure use code	NA
presntcode	Use Descriptive Text. Department of Defense current structure use code	NA
heattype_d	Heating Type Code. Type of heating service to the structure	NA

bggenstr :	(Buildings, General, Structure) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
cooltype_d	Cooling Type Code. Type of cooling service to the structure	NA
no_occup	Occupant Amount. Number of persons currently occupying the structure	NA
areainside	Inside Area. Total inside area of structure	NA
areafloor	Floor Area. Total inside floor area	NA
areausable	Usable Area. Total inside useable area	NA
areaperocc	Occupant Useable Area. Total inside useable area per number of occupants	NA
areagndcov	Ground Covered By Structure Area. Area of the ground covered by the structure	NA
areas_u_d	Areas Unit Measure Code. Unit of measure associated with structure areas	SQUARE FOOT, SQUARE INCH, SQUARE MILE
structght	Height Dimension. Maximum height of structure	NA
height_u_d	Height Unit Measure Code. Unit of measure associated with the height of the structure	M=Meter, IN=Inch, FT=Feet
floor_elev	Floor Dimension. Elevation of the floor of the ground level story of a structure	NA
elev_u_d	Elevation Unit Measure Code. Unit of measure associated with the floor elevation of the structure.	M=Meter, IN=Inch, FT=Feet
portbl_wgt	Portable Weight Quantity. Weight of the structure, if portable.	NA
weight_u_d	Weight Unit Measure Code. Unit of measure associated with the weight of a portable structure.	KG=KILOGRAMS, LB=POUNDS
no_levels	Level Amount. Number of structural levels/stories (including stories below ground level)	NA
built_date	Built Date. The date on which the structure was first opened for use. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).	NA
occup_date	Occupation Date. The date on which the structure was occupied by the current residents. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).	NA
movin_date	Move In Date. The projected date the occupants will move out of the structure. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).	NA
inspc_date	Inspection Date. The date on which the structure was last inspected. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).	NA

bggenstr :	(Buildings, General, Structure) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
demol_date	Demolition Date. The date on which the structure will be demolished and no longer used. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).	NA
address_id	(FK) JOIN to cmgenadd. Used to link the record to an associated address record.	NA
dstrict_id	(FK) JOIN to crhstdst. Used to link the record to an associated historic district, where appropriate.	NA
landuse_id	(FK) JOIN to lscndlus. Used to link the record to an associated land use record.	NA
instln_id	(FK) JOIN to cddodins. Used to link the record to the applicable INSTALLATION record.	NA
project_id	(FK) JOIN to cmgenprj. Used to link the record to the appropriate project or contract under which the item was studied, collected, installed, purchased, or managed.	NA
narrative	Narrative Text. A description or other unique information concerning the subject item, limited to 240 characters.	NA
user_flag	User Flag Text An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.	NA
str_use2_d	Secondary Use Code. A secondary use code for the structure.	APARTMENT, BARN, CHURCH, CONDO
area_size	Area. The size of the area, zone, or polygon in square units.	NA
area_u_d	Area Size Unit Measure Code. The unit of measure for area.	SQUARE FOOT, SQUARE INCH, SQUARE MILE
Perim	Perimeter Dimension. The distance around the boundary of the area, zone, or subject item in linear units.	NA
perim_u_d	Perimeter Unit Measure Code The unit of measure for length	M=Meter, IN=Inch, FT=Feet
vehwei_id	(FK) JOIN to trvehwei. Used to link the record to the applicable weigh station record.	NA
str_mat_d	Material Code. The construction type of material used in the building.	BRICK, CANVAS, CEMENT
facil_id	(FK) JOIN to cmgenfac. Used to link the record to the Facility Record.	NA

bggenstr :	(Buildings, General, Structure) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
grid_value	Graphic Attribute Raster Gvalue. A numeric identification of a raster element in an image or grid that represents the feature.	NA
rrdstat_id	(FK) JOIN to rrrdsta. Used to link the record to any applicable railroad station, where a building, or buildings, are present.	NA
fut_stat_d	Future Structure Code Discriminator. Used with structure_future_site to define the status of the planned building.	FUTURE_DEV, UNDER_CONST
coord_x	X Coordinate. The x component of individual coordinate point.	NA
coord_y	Y Coordinate. The y component of individual coordinate point.	NA
coord_z	Z Coordinate. The z component of individual coordinate point.	NA
owner_id	(FK) JOIN to cmgenown. Used to link the record to the owner.	NA
sur_crs_id	(FK) JOIN to hysurcrs. A unique, user defined identifier for each record or instance of an entity.	NA
river_mile	River Mile Reference. Dimension River mile marker.	NA
value_cont	Contents Amount. Value of the contents.	NA
a_cost	Actual Total Amount. An actual total cost for completing the activity. Round off to nearest thousand dollars.	NA
isr_code_d	ISR Code. The Installation Status Report color code.	AMBER, GREEN, RED
building_no	Number Code. The code indicating the number of the building.	NA
facil_no	Facility Number. The actual building number on the physical structure (NFADB facno)	NA
date_acqrd	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).	NA
prv_cost	The replacement cost of a facility, to the fivefoot line, calculated in today's dollars with today's standards for design and construction. It includes supervision, inspection and overhead (SIOH) costs as well as design costs. PRV is calculated by DoD component using the OSD-developed formula as follows: PRV=(Facility Quantity X Construction Cost Factor X Area Cost Factor) X 1.2, where Facility Quantity is the Primary Unit of Measure quantity; Area Cost Factor is the adjustment applied for geographical location; and 1.2 is a 20% adjustment for SIOH and design costs.	NA

bggenstr :	(Buildings, General, Structure) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
date_prv	The date the plant replacement value was last calculated. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).	NA

Table 2. Cultural resource child table CRHSTSTR – cultural historic structure.

Definition: This table contains data about historically significant structures.

crhststr:	(Cultural, Historic, Structure) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
hstbld_id	(PK) Primary Key A unique operator generated alphanumeric identifier assigned to a facility within an installation for identification throughout its life cycle. Historic Building ID.	NA
datalink	Unique Data Identifier Graphic Key. Graphic Key. This attribute normally contains a linking key to an external graphic element. In some systems, this key is managed and populated by the GIS. Care should be taken in modifying this field manually. This is NOT the table's (PK).	NA
map_id	(FK) JOIN to cmgenmap (Common General, Analog and Digital Maps Attribute table) Used to link the record to the appropriate map.	NA
meta_id	(FK) JOIN to cmgenmet (Common General, Metadata Attribute table) Used to link the record to the applicable feature level metadata record(s)	NA
media_id	(FK) JOIN to cmmedmed (Common Media, Common Media Attribute table) Used to link the record to associated multimedia records that reference data such as imagery, video, audio, scanned documents, drawings, and other digital media	NA
coord_id	(FK) JOIN to cmgencrd (Common General, Positional Location Attribute table). Used to link the record to the appropriate point coordinate record(s).	NA
str_stt_d	Status Code Discriminator. A descriptor for the status of the structure.	LEGEND, RUINS, STANDING

crhststr:	(Cultural, Historic, Structure) – Attribute Definitions <i>(PK) - The primary key of an entity table uniquely identifies each record in the table.</i> <i>(FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.</i>	Domain Examples <i>(Range or Values)</i>
prop_stt_d	Property Usage Status Code - The usage status of the structure.	USABLE, UNKNOWN
rooms	Room Quantity - The number of rooms in the historic structure.	NA
affil_d	Affiliated Artifact Time Code - The cultural prehistoric or historic period with which the artifact is affiliated.	ADENA, CADDO_1, BAYTOWN
arch_sty_d	Architectural Style Code - The code indicating the architectural style of the structure.	BUNGALOW, CLASSIC, CHICAGO
architect	Architect Name - The name of the person or firm that was the architect for the structure.	NA
use_str_d	Use Code - The current use of the structure.	ARMORY, CAPITOL, CLUBHOUSE
disturb_d	Disturbance Level Code - The level of disturbance to the historic structure.	DESTROYED, MAJORIMPACT, NONE
str_design	Designation Name - Primary structure designation. This designation is assigned by the agency with jurisdiction over the structure. The agency is specified in the poc_agency attribute.	NA
habs_num	Historic American Building Survey Number Code - The Historic American Buildings Survey number for the structure.	NA
haer_num	Historic American Engineering Record Number Code - The Historic American Engineering Record number for the structure.	NA
value_d	Value Code - The code indicating the historic value of the structure.	HIGH, HIGHEST, MEDIUM
stru_size	Floor Area - The total floor area of the interior space in the historic structure.	NA
prop_size	Property Grounds Size Area - The total area of any grounds surrounding the historic structure.	NA
prop_u_d	Property Unit Measure Code - Unit of measure for the property surrounding the historic site.	SQUARE FOOT, SQUARE INCH, SQUARE MILE
stt_use_d	Usage Status Code - The usage status of the structure.	RUINS, STANDING

crhststr:	(Cultural, Historic, Structure) – Attribute Definitions <i>(PK) - The primary key of an entity table uniquely identifies each record in the table.</i> <i>(FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.</i>	Domain Examples <i>(Range or Values)</i>
str_desc	Condition Descriptive - Text Description of the condition of the structure.	NA
signif_d	Significance Code - Brief description of the historic significance of the structure.	ART, COMMERCE, ECONOMICS
imp_pri_d	Prior to Discovery Impact Code - The factor that caused the greatest impact to the site prior to discovery.	COMBINED, HISTORICAL, INTACT
imp_fut_d	Future Impact Code - The primary continuing or potential factor that threatens the future integrity of the site.	COMBINED, HISTORICAL, INTACT
mgmt_recom	Mgt Recommendation Descriptive Text - The management recommendation for maintaining and preserving the historic structure.	NA
nreg_cri_d	National Register Criteria Code - The criteria used to nominate the site for National Register of Historic Places status.	A, B, C
nreg_con_d	National Register Consideration Code - Other issues to consider for placement on the National Register of Historic Places.	BIRTHPLACE, GRAVE, RELIGION
nreg_rat_d	National Register Rating Code - National Register of Historic Places rating for the historic value of the site.	HIGH, HIGHEST, MEDIUM
nreg_stt_d	National Register Status Code - Status of placement of site on the National Register of Historic Places.	LISTED, ELIGIBLE, UNKNOWN
stru_u_d	Unit Measure Code - Unit of measure for the interior space in the structure.	SQUARE FOOT, SQUARE INCH, SQUARE MILE
levels	Number of Levels Quantity, the number of stories in the structure, including those below ground level.	NA
municip_id	(FK) JOIN to cmgenmun (Common General, Municipality) Used to link the record to a municipality.	NA
dstrict_id	(FK) JOIN to crhstdst (Cultural Historic, Historic District Attribute table) Used to link the record to the cultural historic district.	NA
area_size	Area, the size of the area, zone, or polygon in square units.	NA

crhststr:	(Cultural, Historic, Structure) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
area_u_d	Area Size Unit Measure Code, the unit of measure for area.	SQUARE FOOT, SQUARE INCH, SQUARE MILE
perim	Perimeter Dimension, the distance around the boundary of the area, zone, or subject item in linear units.	NA
perim_u_d	Perimeter Unit Measure Code The unit of measure for length	M=Meter, IN=Inch, FT=Feet
instln_id	(FK) JOIN to cddodins (Cadastre Federal DoD, DoD Property Attribute table) Used to link the record to the applicable INSTALLATION record.	NA
buildng_id	(FK) JOIN to bggenstr (Buildings General, Buildings Structure Attribute table) Used to link the record to an associated facility (building, structure).	NA
project_id	(FK) JOIN to cmgenprj (Common General, Project Attribute table) Used to link the record to the appropriate project or contract under which the item was studied, collected, installed, purchased, or managed.	NA
user_flag	User Flag Text An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.	NA
facil_id	(FK) JOIN to cmgenfac (Common General, Facility Attribute table)Used to link the record to the Facility Record.	NA
grid_value	Graphic Attribute Raster GValue A numeric identification of a raster element in an image or grid that represents the feature.	NA
coord_x	X Coordinate The x component of individual coordinate point.	NA
coord_y	Y Coordinate The y component of individual coordinate point.	NA
coord_z	Z Coordinate The z component of individual coordinate point.	NA
nreg_no	National Historical Registry Number Identifier The number used as a reference for the National Historical Registry.	NA

crhststr:	(Cultural, Historic, Structure) – Attribute Definitions <i>(PK) - The primary key of an entity table uniquely identifies each record in the table.</i> <i>(FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.</i>	Domain Examples <i>(Range or Values)</i>
sur_crs_id	(FK) - Links the record to HYSURCRS through primary key SUR_CRD_ID.	NA
up_riv_mil	The relative mile marker at the up river end of the historic structure.	NA
dn_riv_mil	The relative mile marker at the down river end of the historic structure	NA
agency-id	(FK) - Links the record to CMGENAGC through key AGENCY_ID.	NA
owner-id	(FK) - Links the record to CMGENOWN through primary key OWNER_ID.	NA
setting	A brief description of the environmental setting of the structure.	NA
str_name	Name of the historic structure.	NA
feat_typ_d	Code for the type of cultural resource feature	MONUMENT, MARKERS, LANDMARKS
start_cen	The century portion of the conventional date when the structure was first built. (for 1836=1800)	NA
start_dec	The decade portion of the conventional date when the structure was first built. (for 1836=30)	NA
start_yr	The year portion of the conventional date when the structure was first built. (for 1836=6)	NA
end_cen	The century portion of the conventional date when the structure was last used. (for 1836=1800)	NA
end_dec	The decade portion of the conventional date when the structure was last used. (for 1836=30)	NA
end_yr	The year portion of the conventional date when the structure was last used. (for 1836=6)	NA
address_id	(FK) - Links the record to CMGENADD through primary key ADDRESS_ID.	NA
location	A description of the location if no address is available.	NA

crhststr:	(Cultural, Historic, Structure) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
survey_id	(FK) - Links the record to GDSRIPRJ through primary key SURVEY_ID	NA
rec_rep_d	The type of agency serving as the repository of the records for the investigation of the structure.	FEDERAL, SHPO, STATE
loc_rel_d	An indication of the reliability of the artifact's recorded location.	GOOD, NONE, POOR
poc_id	(FK) - Links the record to CMGENPOC through primary key POC_ID	NA
delisted	The date a listing was deleted from the NRHP. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915)	NA
narrative	A description or other unique information concerning the subject item, limited to 240 characters.	NA

Table 3. Cultural resource child table CRGENCHR – cultural resources, general, characteristics.

Definition: This table contains information about the characteristics of historically significant structures.

crgenchr:	(Cultural Resources, General, Characteristics) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
crm_str_id	(PK) Identifier A unique, user defined identifier for each record or instance of an entity.	NA
meta_id	(FK) JOIN to crngenmet Used to link the record to the applicable feature level metadata record(s).	NA
char_typ_d	Type Code Type of characteristic being described.	SILL, SHUTTERS, LINTEL
char_desc	Descriptive Text Brief description of the characteristic of the historic structure.	NA
building_id	(FK) JOIN to bggenstr Used to link the record to an associated facility (building, structure).	NA

crgenchr:	(Cultural Resources, General, Characteristics) – Attribute Definitions <i>(PK) - The primary key of an entity table uniquely identifies each record in the table.</i> <i>(FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.</i>	Domain Examples <i>(Range or Values)</i>
user_flag	User Flag Text An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.	NA
facil_id	(FK) JOIN to cmgenfac Used to link the record to the Facility Record.	NA
instln_id	(FK) JOIN to cddodins Used to link the record to the applicable INSTALLATION record.	NA
media_id	(FK) JOIN to cmmedmed Used to link the record to associated multimedia records that reference data such as imagery, video, audio, scanned documents, drawings, and other digital media.	NA
rrbridg_id	(FK) JOIN to trrrdbrg - Links the record to TRRRDBRG through (PK)RRBRIDG_ID.	NA
footbrg_id	(FK) JOIN to trpedbrg - Links the record to TRPEDBRG through (PK)FOOTBRG_ID.	NA
bridge_id	(FK) JOIN to trvehbrg - Links the record to TRVEHBRG through (PK)BRIDGE_ID.	NA
cemetery_id	(FK) JOIN to lscndcem - Links the record to LSCNDCEM through (PK)CEMETRY_ID.	NA

Table 4. Cultural resource child table CRGENHST – cultural resources, general, chronology.

Definition: This table contains information about the chronology of historically significant items.

crgenhst:	(Cultural Resources, General, Chronology) – Attribute Definitions <i>(PK) - The primary key of an entity table uniquely identifies each record in the table.</i> <i>(FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.</i>	Domain Examples <i>(Range or Values)</i>
hst_chr_id	(PK) Identifier. A unique, user defined identifier for each record or instance of an entity.	NA
meta_id	(FK) JOIN to cmgenmet. Used to link the record to the applicable feature level metadata record(s).	NA
date_event	Event Date The date of the chronological event. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).	NA
cond_str_d	Structure Condition Code Code that indicates the condition of the structure.	CRACKED, DAMAGED
evn_typ_d	Event Type Code Type of chronological event.	BATTLE, SPEECH

crgenhst:	(Cultural Resources, General, Chronology) – Attribute Definitions <i>(PK) - The primary key of an entity table uniquely identifies each record in the table.</i> <i>(FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.</i>	Domain Examples <i>(Range or Values)</i>
impact_d	Integrity Impact Code The impact that threatens the integrity of the structure.	INDUNDATED, BIOTURBATION
function_d	Function Code The function of the structure during the chronological period.	ARMORY, CAPITOL
event_desc	Event Description Text Brief description of the chronological event.	NA
source	Descriptive Text Source of information on event.	NA
narrative	Narrative Text A description or other unique information concerning the subject item, limited to 240 characters.	NA
crm_str_id	(FK) JOIN to crgenchr Used to link the record to the Entity record. A unique, user defined identifier for each record or instance of an entity.	NA
buildng_id	(FK) JOIN to bggenstr . Used to link the record to an associated facility (building, structure).	NA
user_flag	User Flag Text An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.	NA
facil_id	(FK) JOIN to cmgenfac Used to link the record to the Facility Record.	NA
instln_id	(FK) JOIN to cddodins Used to link the record to the applicable INSTALLATION record.	NA
media_id	(FK) JOIN to cmmedmed Used to link the record to associated multimedia records that reference data such as imagery, video, audio, scanned documents, drawings, and other digital media	NA
rrbridg_id	(FK) JOIN to trrrdbrg - Links the record to TRRRDBRG through (PK)RRBRIDG_ID.	NA
footbrg_id	(FK) JOIN to trpedbrg - Links the record to TRPEDBRG through (PK)FOOTBRG_ID.	NA
bridge_id	(FK) JOIN to trvehbrg - Links the record to TRVEHBRG through (PK)BRIDGE_ID.	NA
cemetery_id	(FK) JOIN to lscndcem - Links the record to LSCNDCEM through (PK)CEMETRY_ID.	NA

Table 5. Cultural resource child table CRHSTFET – cultural resources, historic, features.

Definition: This table contains data about historic features.

crhstfet:	(Cultural Resources, Historic, Features) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
crmfeat_id	(PK) Identifier A unique, user defined identifier for each record or instance of an entity.	NA
datalink	Unique Data Identifier Graphic Key. This attribute normally contains a linking key to an external graphic element. In some systems, this key is managed and populated by the GIS. Care should be taken in modifying this field manually. This is NOT the table's (PK).	NA
map_id	(FK) JOIN to cmgenmap (Common General, Analog and Digital Maps Attribute table) Used to link the record to the appropriate map.	NA
meta_id	(FK) JOIN to cmgenmet (Common General, Metadata Attribute table) Used to link the record to the applicable feature level metadata record(s).	NA
media_id	(FK) JOIN to cmmedmed (Common Media, Common Media Attribute table) Used to link the record to associated multimedia records that reference data such as imagery, video, audio, scanned documents, drawings, and other digital media.	NA
coord_id	(FK) JOIN to cmgencrd (Common General, Positional Location Attribute table). Used to link the record to the appropriate point coordinate record(s).	NA
date_estab	Established Date The date the feature was established. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).	NA
feat_typ_d	Feature Type Code Type of cultural resource feature.	MONUMENT, MARKERS, LANDMARKS
feat_desc	Descriptive Text Description of the cultural resource feature	NA
signif_d	Significance Code. Historic significance of the feature.	ART, COMMERCE, ECONOMICS
feat_name	Descriptive Text Description of the cultural resource feature.	NA
off_desig	Maintaining Agency Identifier Code Identifier of the feature as assigned by the maintaining agency.	NA

crhstfet:	(Cultural Resources, Historic, Features) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
poc_id	(FK) JOIN to cmgenpoc (Common General, Point of Contact Attribute table). Used to link the feature with a point of contact.	NA
project_id	(FK) JOIN to cmgenprj (Common General, Project Attribute table) Used to link the record to the appropriate project or contract under which the item was studied, collected, installed, purchased, or managed.	NA
dstrict_id	(FK) JOIN to crhstdst (Common General, Historic District Attribute table) Used to link the record to the appropriate DISTRICT record.	NA
feat_hght	Height Dimension The height of the feature	NA
feat_wid	Width Dimension The width of the feature.	NA
feat_lgth	Length Dimension The length of the feature.	NA
dim_u_d	Dimension Unit Measure Code The unit if measure for the length of the feature.	M=Meter, IN=Inch, FT=Feet
user_flag	User Flag Text An operator defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.	NA
instln_id	(FK) JOIN to cddodins (Cadastre Federal DoD, DoD Property Attribute Table) Used to link the record to the applicable INSTALLATION record.	NA
facil_id	(FK) JOIN to cmgenfac (Common General, Facility Attribute table). Used to link the record to the Facility Record.	NA
grid_value	Graphic Attribute Raster GValue A numeric identification of a raster element in an image or grid that represents the feature.	NA
coord_x	X Coordinate The x component of individual coordinate point.	NA
coord_y	Y Coordinate The y component of individual coordinate point.	NA

crhstfet:	(Cultural Resources, Historic, Features) – Attribute Definitions <i>(PK) - The primary key of an entity table uniquely identifies each record in the table.</i> <i>(FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.</i>	Domain Examples <i>(Range or Values)</i>
coord_z	Z Coordinate The z component of individual coordinate point.	NA
his_typ_d	Type Code A discriminated value for the type of historic monument or landmark.	NATIONAL, OTHER, STATE
perim	Perimeter Dimension The distance around the boundary of the area, zone, or subject item in linear units.	NA
area_u_d	Area Size Unit Measure Code. The unit of measure for area.	SQUARE FOOT, SQUARE INCH, SQUARE MILE
area_size	Area The size of the area, zone, or polygon in square units.	NA
perim_u_d	Perimeter Unit Measure Code The unit of measure for length	M=Meter, IN=Inch, FT=Feet
rrbrdg_id	(FK) JOIN to trrrdbrg - Links the record to TRRRDBRG through (PK)RRBRIDG_ID.	NA
footbrg_id	(FK) JOIN to trpedbrg - Links the record to TRPEDBRG through (PK)FOOTBRG_ID.	NA
bridge_id	(FK) JOIN to trvehbrg - Links the record to TRVEHBRG through (PK)BRIDGE_ID.	NA
buildng_id	(FK) JOIN to bggenstr (Buildings General, Buildings Structure Attribute table) Used to link the record to an associated facility (building, structure).	NA

Table Name: **cmgenadd** – general address

Definition: This table contains information about addresses

Join Relationships: **Cultural Resource Child Tables to Parent (cmgenadd)**

CMGENADD is supported by four child tables (two included here).

crhststr – cultural historic structure table

crgenspo – historic characteristics structures table

bggenstr – buildings general structure (Not Included here - Included elsewhere under its own heading)

crarcsit – archeological site data table. (Not included - related to archeology)

All Parent Tables to Child cmgenadd

The data contained in child tables can be directly queried by associated parent tables.

cmgenent – This table contains information about counties or parishes.

crhstdst – This table contains data about historic districts.

cmgenmet – This table contains attribute table level metadata, data about the attribute data which identifies items like who collected the data, when it was collected, and the accuracy of the data.

cmmedmed – This table contains information about any external image, graphic, cad file, or other representation of the feature.

Table 6. Parent table CMGENADD – common general address.

cmgenadd :	cmgemadd (Common, General, Address) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
address_id	(PK) Identifier A unique user defined identifier for each record or instance of an entity.	NA
meta_id	(FK) Used to link the record to the applicable feature level metadata record(s).	NA
add_type_d	Type of address (e.g., Federal Government, Business, Home).	HOME, BUSINESS, OTHER
phone	Telephone Number for the address point of contact.	NA
fax	Fax Machine Number for the address point of contact.	NA
building_no	Building number used in address.	NA
p_o_box	Post Office box number.	NA
ruralroute	The rural route of an address (if needed).	NA
address_1	The first line of the address.	NA
address_2	The second line of the address (if needed).	NA
city_name	The city or town in which the address is located.	NA
state_d	The state in which the address is located.	IL, AK, CO, NY
zip_code	The zip code of the address.	NA
county_id	(FK). Used to link the buffer area with the surrounding county or municipality.	NA
country_d	The country in which the address is located.	CANADA, MEXICO, USA, Other
e_mail_no	Electronic Mail Address	NA
e_mail_typ	Type of e-mail used (e.g., CompuServe, internet, etc.).	NA
webaddress	World Wide Web Internet Address.	NA
ftpaddress	Ftp Address.	NA
acctlogin	Login for FTP Account.	NA
acctpasswd	Password for FTP Account.	NA
narrative	A description or other unique information concerning the subject item, limited to 240 characters.	NA

cmgenadd :	cmgemadd (Common, General, Address) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
user_flag	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.	NA
media_id	Foreign Key. Used to link the record to associated multimedia records that reference data such as imagery, video, audio, scanned documents, drawings, and other digital media.	NA
district_id	(FK) - Links the record to CRHSTDST through primary key DSTRIC_ID.	NA
osd_city	In the US, the four-character digit code for the metropolitan area closest to the site. (If not in the U.S., use "9999".)	NA

Table 7. Cultural resource child table CRHSTSTR – cultural historic structure.

Definition: This table contains data about historically significant structures.

crhststr:	(Cultural, Historic, Structure) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
hstbld_id	(PK) Primary Key A unique operator generated alphanumeric identifier assigned to a facility within an installation for identification throughout its life cycle. Historic Building ID.	NA
datalink	Unique Data Identifier Graphic Key. Graphic Key. This attribute normally contains a linking key to an external graphic element. In some systems, this key is managed and populated by the GIS. Care should be taken in modifying this field manually. This is NOT the table's (PK).	NA
map_id	(FK) JOIN to cmgenmap (Common General, Analog and Digital Maps Attribute table) Used to link the record to the appropriate map.	NA
meta_id	(FK) JOIN to cmgenmet (Common General, Metadata Attribute table) Used to link the record to the applicable feature level metadata record(s)	NA

crhststr:	(Cultural, Historic, Structure) – Attribute Definitions <i>(PK) - The primary key of an entity table uniquely identifies each record in the table.</i> <i>(FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.</i>	Domain Examples <i>(Range or Values)</i>
media_id	(FK) JOIN to cmmedmed (Common Media, Common Media Attribute table) Used to link the record to associated multimedia records that reference data such as imagery, video, audio, scanned documents, drawings, and other digital media	NA
coord_id	(FK) JOIN to cmgenrcd (Common General, Positional Location Attribute table). Used to link the record to the appropriate point coordinate record(s).	NA
str_stt_d	Status Code Discriminator. A descriptor for the status of the structure.	LEGEND, RUINS, STANDING
prop_stt_d	Property Usage Status Code - The usage status of the structure.	USABLE, UNKNOWN
rooms	Room Quantity - The number of rooms in the historic structure.	NA
affil_d	Affiliated Artifact Time Code - The cultural prehistoric or historic period with which the artifact is affiliated.	ADENA, CADD0_1, BAYTOWN
arch_sty_d	Architectural Style Code - The code indicating the architectural style of the structure.	BUNGALOW, CLASSIC, CHICAGO
architect	Architect Name - The name of the person or firm that was the architect for the structure.	NA
use_str_d	Use Code - The current use of the structure.	ARMORY, CAPITOL, CLUBHOUSE
disturb_d	Disturbance Level Code - The level of disturbance to the historic structure.	DESTROYED, MAJORIMPACT, NONE
str_design	Designation Name - Primary structure designation. This designation is assigned by the agency with jurisdiction over the structure. The agency is specified in the poc_agency attribute.	NA
habs_num	Historic American Building Survey Number Code - The Historic American Buildings Survey number for the structure.	NA
haer_num	Historic American Engineering Record Number Code - The Historic American Engineering Record number for the structure.	NA
value_d	Value Code - The code indicating the historic value of the structure.	HIGH, HIGHEST, MEDIUM
stru_size	Floor Area - The total floor area of the interior space in the historic structure.	NA
prop_size	Property Grounds Size Area - The total area of any grounds surrounding the historic structure.	NA
prop_u_d	Property Unit Measure Code - Unit of measure for the property surrounding the historic site.	SQUARE FOOT, SQUARE INCH, SQUARE MILE
stt_use_d	Usage Status Code - The usage status of the structure.	RUINS, STANDING

crhststr:	(Cultural, Historic, Structure) – Attribute Definitions <i>(PK) - The primary key of an entity table uniquely identifies each record in the table.</i> <i>(FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.</i>	Domain Examples <i>(Range or Values)</i>
str_desc	Condition Descriptive - Text Description of the condition of the structure.	NA
signif_d	Significance Code - Brief description of the historic significance of the structure.	ART, COMMERCE, ECONOMICS
imp_pri_d	Prior to Discovery Impact Code - The factor that caused the greatest impact to the site prior to discovery.	COMBINED, HISTORICAL, INTACT
imp_fut_d	Future Impact Code - The primary continuing or potential factor that threatens the future integrity of the site.	COMBINED, HISTORICAL, INTACT
mgmt_recom	Mgt Recommendation Descriptive Text - The management recommendation for maintaining and preserving the historic structure.	NA
nreg_cri_d	National Register Criteria Code - The criteria used to nominate the site for National Register of Historic Places status.	A, B, C
nreg_con_d	National Register Consideration Code - Other issues to consider for placement on the National Register of Historic Places.	BIRTHPLACE, GRAVE, RELIGION
nreg_rat_d	National Register Rating Code - National Register of Historic Places rating for the historic value of the site.	HIGH, HIGHEST, MEDIUM
nreg_stt_d	National Register Status Code - Status of placement of site on the National Register of Historic Places.	LISTED, ELIGIBLE, UNKNOWN
stru_u_d	Unit Measure Code - Unit of measure for the interior space in the structure.	SQUARE FOOT, SQUARE INCH, SQUARE MILE
levels	Number of Levels Quantity, the number of stories in the structure, including those below ground level.	NA
municip_id	(FK) JOIN to cmgenmun (Common General, Municipality) Used to link the record to a municipality.	NA
dstrict_id	(FK) JOIN to crhstdst (Cultural Historic, Historic District Attribute table) Used to link the record to the cultural historic district.	NA
area_size	Area, the size of the area, zone, or polygon in square units.	NA
area_u_d	Area Size Unit Measure Code, the unit of measure for area.	SQUARE FOOT, SQUARE INCH, SQUARE MILE
perim	Perimeter Dimension, the distance around the boundary of the area, zone, or subject item in linear units.	NA

crhststr:	(Cultural, Historic, Structure) – Attribute Definitions <i>(PK) - The primary key of an entity table uniquely identifies each record in the table.</i> <i>(FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.</i>	Domain Examples <i>(Range or Values)</i>
perim_u_d	Perimeter Unit Measure Code The unit of measure for length	M=Meter, IN=Inch, FT=Feet
instln_id	(FK) JOIN to cddodins (Cadastre Federal DoD, DoD Property Attribute table) Used to link the record to the applicable INSTALLATION record.	NA
building_id	(FK) JOIN to bggenstr (Buildings General, Buildings Structure Attribute table) Used to link the record to an associated facility (building, structure).	NA
project_id	(FK) JOIN to cmgenprj (Common General, Project Attribute table) Used to link the record to the appropriate project or contract under which the item was studied, collected, installed, purchased, or managed.	NA
user_flag	User Flag Text An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.	NA
facil_id	(FK) JOIN to cmgenfac (Common General, Facility Attribute table)Used to link the record to the Facility Record.	NA
grid_value	Graphic Attribute Raster GValue A numeric identification of a raster element in an image or grid that represents the feature.	NA
coord_x	X Coordinate The x component of individual coordinate point.	NA
coord_y	Y Coordinate The y component of individual coordinate point.	NA
coord_z	Z Coordinate The z component of individual coordinate point.	NA
nreg_no	National Historical Registry Number Identifier The number used as a reference for the National Historical Registry.	NA
sur_crs_id	(FK) - Links the record to HYSURCRS through primary key SUR_CRS_ID.	NA
up_riv_mil	The relative mile marker at the up river end of the historic structure.	NA
dn_riv_mil	The relative mile marker at the down river end of the historic structure	NA
agency-id	(FK) - Links the record to CMGENAGC through key AGENCY_ID.	NA
owner-id	(FK) - Links the record to CMGENOWN through primary key OWNER_ID.	NA
setting	A brief description of the environmental setting of the structure.	NA

crhststr:	(Cultural, Historic, Structure) – Attribute Definitions <i>(PK) - The primary key of an entity table uniquely identifies each record in the table.</i> <i>(FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.</i>	Domain Examples <i>(Range or Values)</i>
str_name	Name of the historic structure.	NA
feat_typ_d	Code for the type of cultural resource feature	MONUMENT, MARKERS, LANDMARKS
start_cen	The century portion of the conventional date when the structure was first built. (for 1836=1800)	NA
start_dec	The decade portion of the conventional date when the structure was first built. (for 1836=30)	NA
start_yr	The year portion of the conventional date when the structure was first built. (for 1836=6)	NA
end_cen	The century portion of the conventional date when the structure was last used. (for 1836=1800)	NA
end_dec	The decade portion of the conventional date when the structure was last used. (for 1836=30)	NA
end_yr	The year portion of the conventional date when the structure was last used. (for 1836=6)	NA
address_id	(FK) - Links the record to CMGENADD through primary key ADDRESS_ID.	NA
location	A description of the location if no address is available.	NA
survey_id	(FK) - Links the record to GDSRIPRJ through primary key SURVEY_ID	NA
rec_rep_d	The type of agency serving as the repository of the records for the investigation of the structure.	FEDERAL, SHPO, STATE
loc_rel_d	An indication of the reliability of the artifact's recorded location.	GOOD, NONE, POOR
poc_id	(FK) - Links the record to CMGENPOC through primary key POC_ID	NA
delisted	The date a listing was deleted from the NRHP. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915)	NA
narrative	A description or other unique information concerning the subject item, limited to 240 characters.	NA

Table 8. Cultural resource child table CRGENSPO – historic characteristics structures.

Definition: This table contains data about historic characteristics of significant structures.

crgenspo:	(Historic characteristics structures table) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
shpo_id	(PK) Identifier A locally assigned identifier for the record.	NA
meta_id	(FK) JOIN to cmgenmet Used to link the record to the applicable feature level metadata record(s).	NA
media_id	(FK) JOIN to cmmedmed Used to link the record to associated multimedia records that reference data such as imagery, video, audio, scanned documents, drawings, and other digital media.	NA
poc_id	(FK) JOIN to cmgenpoc - Links the record to CMGENPOC through (PK) POC_ID.	NA
address_id	(FK) JOIN to cmgenadd - Links the record to CMGENADD through (PK) ADDRESS_ID.	NA
project_id	(FK) JOIN to cmgenprj - Links the record to CMGENPRJ through (PK) PROJECT_ID.	NA
parcel_id	(FK) JOIN to cdrelpar - Links the record to CDRELPAR through (PK) PARCEL_ID.	NA
date_prep	Prepared Date The date the SHPO form was prepared. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).	NA
state_d	State Code Name of the state.	IL, AK, CO, NY
shpocode_d	Survey Code The code which denotes how the site was surveyed.	CRM, PROB, OTHER
instln_id	(FK) JOIN to cddodins Used to link the record to the applicable INSTALLATION record.	NA
facil_id	(FK) JOIN to cmgenfac Used to link the record to the Facility Record.	NA
user_flag	User Flag Text An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.	NA

Table Name: **cmgenmun** – Cultural Resource municipalities

Definition: This table contains information about various municipalities, such as towns cities or villages.

Join Relationships: **Cultural Resource Child Tables to Parent (cmgenmun)**

In addition to a municipality being described by all the data attributes in the cultural resource municipality table (cmgenmun), a municipality is further described by all data attributes in its associated child tables.

crhststr – cultural historic structure table

crhstdst – cultural historic district table

All Parent Tables to Child cmgenmun

The data contained in child tables can be directly queried by associated parent tables.

cmgenadd – This table contains information about addresses.

cmgenmet – This table contains attribute table level metadata, data about the attribute data which identifies items like who collected the data, when it was collected, and the accuracy of the data.

cmmedmed – This table contains information about any external image, graphic, cad file, or other representation of the feature.

cmgenpoc – This table contains information about individuals, personnel, and points of contact.

cmgenven – This table contains information about commercial vendors.

cmgenent – This table contains information about counties or parishes.

Table 9. Parent table CMGENMUN – common general municipalities.

cmgenmun:	(Cultural Resources, municipalities) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
municip_id	(PK) A unique, user defined identifier for each record or instance of an entity.	NA
address_id	(FK). Used to link the record to the ADDRESS record.□	NA
date_rev	Date the information was last revised or verified. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).	NA
muni_typ_d	The type of municipality.	CITY, TOWN, TOWNSHIP
muni_name	The name of the municipality.	NA
muni_desc	A general description of the municipality.	NA
populate	The estimated population of the municipality.	NA
state_d	State in which the municipality is located..□	IL, AK, CO
narrative	A description or other unique information concerning the subject item, limited to 240 characters.	NA
vendor_id	(FK). Used to link the record to a contractor.	NA
poc_id	(FK). Used to link the record to the point of contact.□	NA
county_id	(FK). Used to link the record to the county.	NA
user_flag	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.	NA
meta_id	(FK). Used to link the record to the applicable feature level metadata record(s).	NA
media_id	Foreign Key. Used to link the record to associated multimedia records that reference data such as imagery, video, audio, scanned documents, drawings, and other digital media.	NA

Table 10. Cultural resource child table CRHSTSTR – cultural resources, historic structure.

Definition: This table contains data about historically significant structures.

crhststr:	(Cultural, Historic, Structure) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
hstbld_id	(PK) Primary Key A unique operator generated alphanumeric identifier assigned to a facility within an installation for identification throughout its life cycle. Historic Building ID.	NA
datalink	Unique Data Identifier Graphic Key. Graphic Key. This attribute normally contains a linking key to an external graphic element. In some systems, this key is managed and populated by the GIS. Care should be taken in modifying this field manually. This is NOT the table's (PK).	NA
map_id	(FK) JOIN to cmgenmap (Common General, Analog and Digital Maps Attribute table) Used to link the record to the appropriate map.	NA
meta_id	(FK) JOIN to cmgenmet (Common General, Metadata Attribute table) Used to link the record to the applicable feature level metadata record(s)	NA
media_id	(FK) JOIN to cmmedmed (Common Media, Common Media Attribute table) Used to link the record to associated multimedia records that reference data such as imagery, video, audio, scanned documents, drawings, and other digital media	NA
coord_id	(FK) JOIN to cmgenrcrd (Common General, Positional Location Attribute table). Used to link the record to the appropriate point coordinate record(s).	NA
str_stt_d	Status Code Discriminator. A descriptor for the status of the structure.	LEGEND, RUINS, STANDING
prop_stt_d	Property Usage Status Code - The usage status of the structure.	USABLE, UNKNOWN
rooms	Room Quantity - The number of rooms in the historic structure.	NA
affil_d	Affiliated Artifact Time Code - The cultural prehistoric or historic period with which the artifact is affiliated.	ADENA, CADDO_1, BAYTOWN
arch_sty_d	Architectural Style Code - The code indicating the architectural style of the structure.	BUNGALOW, CLASSIC, CHICAGO
architect	Architect Name - The name of the person or firm that was the architect for the structure.	NA

crhststr:	(Cultural, Historic, Structure) – Attribute Definitions <i>(PK) - The primary key of an entity table uniquely identifies each record in the table.</i> <i>(FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.</i>	Domain Examples <i>(Range or Values)</i>
use_str_d	Use Code - The current use of the structure.	ARMORY, CAPITOL, CLUBHOUSE
disturb_d	Disturbance Level Code - The level of disturbance to the historic structure.	DESTROYED, MAJORIMPACT, NONE
str_design	Designation Name - Primary structure designation. This designation is assigned by the agency with jurisdiction over the structure. The agency is specified in the poc_agency attribute.	NA
habs_num	Historic American Building Survey Number Code - The Historic American Buildings Survey number for the structure.	NA
haer_num	Historic American Engineering Record Number Code - The Historic American Engineering Record number for the structure.	NA
value_d	Value Code - The code indicating the historic value of the structure.	HIGH, HIGHEST, MEDIUM
stru_size	Floor Area - The total floor area of the interior space in the historic structure.	NA
prop_size	Property Grounds Size Area - The total area of any grounds surrounding the historic structure.	NA
prop_u_d	Property Unit Measure Code - Unit of measure for the property surrounding the historic site.	SQUARE FOOT, SQUARE INCH, SQUARE MILE
stt_use_d	Usage Status Code - The usage status of the structure.	RUINS, STANDING
str_desc	Condition Descriptive - Text Description of the condition of the structure.	NA
signif_d	Significance Code - Brief description of the historic significance of the structure.	ART, COMMERCE, ECONOMICS
imp_pri_d	Prior to Discovery Impact Code - The factor that caused the greatest impact to the site prior to discovery.	COMBINED, HISTORICAL, INTACT
imp_fut_d	Future Impact Code - The primary continuing or potential factor that threatens the future integrity of the site.	COMBINED, HISTORICAL, INTACT
mgmt_recom	Mgt Recommendation Descriptive Text - The management recommendation for maintaining and pre-serving the historic structure.	NA

crhststr:	(Cultural, Historic, Structure) – Attribute Definitions <i>(PK) - The primary key of an entity table uniquely identifies each record in the table.</i> <i>(FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.</i>	Domain Examples <i>(Range or Values)</i>
nreg_cri_d	National Register Criteria Code - The criteria used to nominate the site for National Register of Historic Places status.	A, B, C
nreg_con_d	National Register Consideration Code - Other issues to consider for placement on the National Register of Historic Places.	BIRTHPLACE, GRAVE, RELIGION
nreg_rat_d	National Register Rating Code - National Register of Historic Places rating for the historic value of the site.	HIGH, HIGHEST, MEDIUM
nreg_stt_d	National Register Status Code - Status of placement of site on the National Register of Historic Places.	LISTED, ELIGIBLE, UNKNOWN
stru_u_d	Unit Measure Code - Unit of measure for the interior space in the structure.	SQUARE FOOT, SQUARE INCH, SQUARE MILE
levels	Number of Levels Quantity, the number of stories in the structure, including those below ground level.	NA
municip_id	(FK) JOIN to cmgenmun (Common General, Municipality) Used to link the record to a municipality.	NA
dstrict_id	(FK) JOIN to crhstdst (Cultural Historic, Historic District Attribute table) Used to link the record to the cultural historic district.	NA
area_size	Area, the size of the area, zone, or polygon in square units.	NA
area_u_d	Area Size Unit Measure Code, the unit of measure for area.	SQUARE FOOT, SQUARE INCH, SQUARE MILE
perim	Perimeter Dimension, the distance around the boundary of the area, zone, or subject item in linear units.	NA
perim_u_d	Perimeter Unit Measure Code The unit of measure for length	M=Meter, IN=Inch, FT=Feet
instln_id	(FK) JOIN to cddodins (Cadastre Federal DoD, DoD Property Attribute table) Used to link the record to the applicable INSTALLATION record.	NA
building_id	(FK) JOIN to bggenstr (Buildings General, Buildings Structure Attribute table) Used to link the record to an associated facility (building, structure).	NA

crhststr:	(Cultural, Historic, Structure) – Attribute Definitions <i>(PK) - The primary key of an entity table uniquely identifies each record in the table.</i> <i>(FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.</i>	Domain Examples <i>(Range or Values)</i>
project_id	(FK) JOIN to cmgenprj (Common General, Project Attribute table) Used to link the record to the appropriate project or contract under which the item was studied, collected, installed, purchased, or managed.	NA
user_flag	User Flag Text An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.	NA
facil_id	(FK) JOIN to cmgenfac (Common General, Facility Attribute table)Used to link the record to the Facility Record.	NA
grid_value	Graphic Attribute Raster GValue A numeric identification of a raster element in an image or grid that represents the feature.	NA
coord_x	X Coordinate The x component of individual coordinate point.	NA
coord_y	Y Coordinate The y component of individual coordinate point.	NA
coord_z	Z Coordinate The z component of individual coordinate point.	NA
nreg_no	National Historical Registry Number Identifier The number used as a reference for the National Historical Registry.	NA
sur_crs_id	(FK) - Links the record to HYSURCRS through primary key SUR_CRS_ID.	NA
up_riv_mil	The relative mile marker at the up river end of the historic structure.	NA
dn_riv_mil	The relative mile marker at the down river end of the historic structure	NA
agency-id	(FK) - Links the record to CMGENAGC through key AGENCY_ID.	NA
owner-id	(FK) - Links the record to CMGENOWN through primary key OWNER_ID.	NA
setting	A brief description of the environmental setting of the structure.	NA

crhststr:	(Cultural, Historic, Structure) – Attribute Definitions <i>(PK) - The primary key of an entity table uniquely identifies each record in the table.</i> <i>(FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.</i>	Domain Examples <i>(Range or Values)</i>
str_name	Name of the historic structure.	NA
feat_typ_d	Code for the type of cultural resource feature	MONUMENT, MARKERS, LANDMARKS
start_cen	The century portion of the conventional date when the structure was first built. (for 1836=1800)	NA
start_dec	The decade portion of the conventional date when the structure was first built. (for 1836=30)	NA
start_yr	The year portion of the conventional date when the structure was first built. (for 1836=6)	NA
end_cen	The century portion of the conventional date when the structure was last used. (for 1836=1800)	NA
end_dec	The decade portion of the conventional date when the structure was last used. (for 1836=30)	NA
end_yr	The year portion of the conventional date when the structure was last used. (for 1836=6)	NA
address_id	(FK) - Links the record to CMGENADD through primary key ADDRESS_ID.	NA
location	A description of the location if no address is available.	NA
survey_id	(FK) - Links the record to GDSRIPRJ through primary key SURVEY_ID	NA
rec_rep_d	The type of agency serving as the repository of the records for the investigation of the structure.	FEDERAL, SHPO, STATE
loc_rel_d	An indication of the reliability of the artifact's recorded location.	GOOD, NONE, POOR
poc_id	(FK) - Links the record to CMGENPOC through primary key POC_ID	NA
delisted	The date a listing was deleted from the NRHP. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915)	NA
narrative	A description or other unique information concerning the subject item, limited to 240 characters.	NA

Table 11. Cultural resource child table CRHSTDST– cultural resources, historic district.

Definition: This table contains data about historic districts.

crhstdst:	(Cultural Resources, Historic, District) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
district_id	(PK) Identifier A unique, user defined identifier for each record or instance of an entity.	NA
datalink	Unique Data Identifier Graphic Key. This attribute normally contains a linking key to an external graphic element. In some systems, this key is managed and populated by the GIS. Care should be taken in modifying this field manually. This is NOT the table's (PK).	NA
map_id	(FK) JOIN to cmgenmap (Common General, Analog and Digital Maps Attribute table) Used to link the record to the appropriate map.	NA
meta_id	(FK) JOIN to cmgenmet (Common General, Metadata Attribute table) Used to link the record to the applicable feature level metadata record(s).	NA
media_id	(FK) JOIN to cmmedmed (Common Media, Common Media Attribute table) Used to link the record to associated multimedia records that reference data such as imagery, video, audio, scanned documents, drawings, and other digital media.	NA
coord_id	(FK) JOIN to cmgenocrd (Common General, Positional Location Attribute table). Used to link the record to the appropriate point coordinate record(s).	NA
arch_sty_d	Architectural Style Code The code which indicates the architectural style of the district.	BUNGALOW, CLASSIC, CHICAGO
cond_desc	Condition Description Name Description of the condition of the district.	NA
cond_dst_d	Condition Code Code that indicates the condition of the district.	CONDEMNED, DAMAGED
dist_desc	Description Name Brief description of the historic significance of the district.	NA
dist_design	Designation Identifier This designation is assigned by the agency with jurisdiction over the district. The agency is specified in the poc_num attribute.	NA
value_d	Value Code The code indicating the historic value of the district.	HIGH, HIGHEST, MEDIUM
signif_d	Significance Code The cultural area or field where this district is most significant.	ART, COMMERCE, ECONOMICS
imp_pri_d	Prior to Discovery Impact Code The factor that caused the greatest impact to the site prior to discovery.	COMBINED, HISTORICAL, INTACT

crhstdst:	(Cultural Resources, Historic, District) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
imp_fut_d	Future Impact Code The primary continuing or potential factor that threatens the future integrity of the site.	COMBINED, HISTORICAL, INTACT
dist_name	District Name. Name of the historic district.	NA
nreg_cri_d	National Register Criteria Code The criteria used to nominate the district for National Register of Historic Places status.	A, B, C
nreg_con_d	National Register Consideration Code Other issues to consider for placement on the National Register of Historic Places.	BIRTHPLACE, GRAVE, RELIGION
nreg_rat_d	National Register Rating Code National Register of Historic Places rating for the historic value of the district.	HIGH, HIGHEST, MEDIUM
nreg_stt_d	National Register Status Code Status of placement of the district on the National Register of Historic Places.	LISTED, ELIGIBLE, UNKNOWN
municip_id	(FK) JOIN to cmgenmun (Common General, Municipality Attribute table) Used to link the record to a particular jurisdiction.	NA
poc_id	(FK) JOIN to cmgenpoc (Common General, Point of Contact Attribute table) Used to link the district with a point of contact.	NA
area_size	Area. The size of the area, zone, or polygon in square units.	NA
area_u_d	Area Size Unit Measure Code. The unit of measure for area	SQUARE FOOT, SQUARE INCH, SQUARE MILE
perim	Perimeter Dimension The distance around the boundary of the area, zone, or subject item in linear units.	NA
perim_u_d	Perimeter Unit Measure Code The unit of measure for length	M=Meter, IN=Inch, FT=Feet
instln_id	(FK) JOIN to cddodins (Cadastre Federal DoD, DoD installations Attribute Table) Used to link the record to the applicable INSTALLATION record.	NA
project_id	(FK) JOIN to cmgenprj (Common General, Project Attribute table) Used to link the record to the appropriate project or contract under which the item was studied, collected, installed, purchased, or managed.	NA

crhstdst:	(Cultural Resources, Historic, District) – Attribute Definitions <i>(PK) - The primary key of an entity table uniquely identifies each record in the table.</i> <i>(FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.</i>	Domain Examples <i>(Range or Values)</i>
user_flag	User Flag Text An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.	NA
facil_id	(FK) JOIN to cmgenfac (Common General, Facility Attribute table)Used to link the record to the Facility Record.	NA
grid_value	Graphic Attribute Raster GValue A numeric identification of a raster element in an image or grid that represents the feature.	NA
coord_x	X Coordinate The x component of individual coordinate point.	NA
coord_y	Y Coordinate The y component of individual coordinate point.	NA
coord_z	Z Coordinate The z component of individual coordinate point.	NA
nreg_no	National Historical Registry Number Identifier The number used as a reference for the National Historical Registry.	NA
sur_crs_id	(FK) - Links the record to HYSURCRS through primary key SUR_CRS_ID.	NA
up_riv_mil	The relative river mile mark at the upper end of the district area.	NA
dn_riv_mil	The relative river mile mark at the lower end of the district area.	NA
setting	A brief description of the environmental setting of the district area.	NA
affil_d	The cultural prehistoric or historic period with which the artifact is affiliated.	ADENA, CADDO_1, BAYTOWN
start_cen	The century portion of the conventional date when the district was first established. (for 1836=1800)	NA
start_dec	The decade portion of the conventional date when the district was first established. (for 1836=30)	NA
start_yr	The year portion of the conventional date when the district was first established. (for 1836=6)	NA
end_cen	The century portion of the conventional date when the was last used. (for 1836-1800)	NA
end_dec	The decade portion of the conventional date when the district was last used. (for 1836=30)	NA
end_yr	The year portion of the conventional date when the district was last used. (for 1836=6)	NA
disturb_d	The code representing the level of disturbance of the district.	DESTROYED, MAJORIMPACT, NONE

crhstdst:	(Cultural Resources, Historic, District) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
survey_id	(FK) - Links the record to GDSRIPRJ through primary key SURVEY_ID.	NA
rec_rep_d	The type of agency serving as the repository of the records for the investigation of the district.	FEDERAL, SHPO, STATE
loc_rel_d	An indication of the reliability of the artifact's recorded location.	GOOD, NONE, POOR
delisted	The date a listing was deleted from the NRHP. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).	NA
narrative	A description or other unique information concerning the subject item, limited to 240 characters.	NA

Table Name: **cmgenprj** – Common general project

Definition: This table contains information about projects.

Join Relationships: **Cultural Resource Child Tables to Parent (cmgenprj)**

In addition to a project being described by all the data attributes in the project table (cmgenprj), a project is further described by all data attributes in its associated child tables.

crhstfet – This table contains information about historic features

crhststr – This table contains information about cultural historic structures

crgenspo – This table contains information about historic characteristics of structures

crhstdst – This table contains information about contains data about historic districts

crgenevt – This table contains information about a cultural occurrence (not included – data collected is not relevant to buildings)

crmgtstrv – This table contains information about sites where detailed investigations have been conducted for cultural resources (not included – related to archeology)

bggenstr – This table contains information about buildings, general structure (not included here – included elsewhere under its own heading)

crarcsit – This table contains information about archeological site data (not included – related to archeology)

All Parent Tables to Child **cmgenprj**

The data contained in child tables can be directly queried by associated parent tables.

cmgenmet – This table contains attribute table level metadata, data about the attribute data which identifies items like who collected the data, when it was collected, and the accuracy of the data.

cmmedmed – This table contains information about any external image, graphic, cad file, or other representation of the feature.

cmgenpoc – This table contains information about individuals, personnel, and points of contact.

Table 12. Parent table CMGENPRJ – common general project.

cmgenprj:	(Common general project) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
project_id	(PK) A unique, user defined identifier for each project or contract.	NA
meta_id	(FK). Used to link the record to the applicable feature level metadata record(s).	NA
proj_name	Name of the project or contract.	NA
date_projs	Date the project is scheduled to start. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).	NA
date_proje	Date the project is scheduled to end. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).	NA
poc_id	(FK) Used to link the record to the applicable POINT OF CONTACT record for the project.	NA
proj_stt_d	Status of the project or contract.	ACTIVE, APPROVED, CANCELLED
proj_desc	Description of the project or contract.	NA
user_flag	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.	NA
project_d	Code indicating the general category or type of project.	CIVILWORKS, MILCON OTHER
date_start	The date the project actually started. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915)	NA
date_end	The date the project was actually completed. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915)	NA
est_cost	The estimated total cost for completing the activity. Round off to nearest thousand dollars.	NA

cmgenprj:	(Common general project) – Attribute Definitions <i>(PK) - The primary key of an entity table uniquely identifies each record in the table.</i> <i>(FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.</i>	Domain Examples <i>(Range or Values)</i>
media_id	(FK) Used to link the record to associated multimedia records that reference data such as imagery, video, audio, scanned documents, drawings, and other digital media.	NA
prj_app_d	The current level of approval this project has obtained.	BASE, DOD, CONGRESS
prj_typ_d	Code indicating the general category or type of project.	CIVILWORKS, MILCON OTHER
prj_cat_d	Code indicating the general category or theme of the project.	AIRFIELD, ECM, FUEL
prj_scat_d	Code indicating the project as new, upgrade, or maintenance.	MAINTENANCE, NEW, UPGRADE
fund_src_d	Code indicating the fund source for the project.	AFH, CDIP, ECAP
fund_app_d	A Boolean indicating whether or not the project is funded.	NO, YES
date_dgn_s	Date the project design is scheduled to start. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).	NA
date_dgn_e	(The date the project construction is scheduled to complete. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915)	NA
cost_dsig	The estimated total design cost for the project. Round off to the nearest thousand dollars.	NA
fund_year	The fund source year. Format is YYYY.	NA
priority	The relative importance of the project.	NA
altprjnum	An alternate or additional project number.	NA
fim_area_d	A code indicating the Facility Investment Metric Impact Rating Area	BS, CS, MS

Table 13. Cultural resource child table CRHSTFET – cultural resources, historic, features.

Definition: This table contains data about historic features.

crhstfet:	(Cultural Resources, Historic, Features) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
crmfeat_id	(PK) Identifier A unique, user defined identifier for each record or instance of an entity.	NA
datalink	Unique Data Identifier Graphic Key. This attribute normally contains a linking key to an external graphic element. In some systems, this key is managed and populated by the GIS. Care should be taken in modifying this field manually. This is NOT the table's (PK).	NA
map_id	(FK) JOIN to cmgenmap (Common General, Analog and Digital Maps Attribute table) Used to link the record to the appropriate map.	NA
meta_id	(FK) JOIN to cmgenmet (Common General, Metadata Attribute table) Used to link the record to the applicable feature level metadata record(s).	NA
media_id	(FK) JOIN to cmmedmed (Common Media, Common Media Attribute table) Used to link the record to associated multimedia records that reference data such as imagery, video, audio, scanned documents, drawings, and other digital media.	NA
coord_id	(FK) JOIN to cmgencrd (Common General, Positional Location Attribute table). Used to link the record to the appropriate point coordinate record(s).	NA
date_estab	Established Date The date the feature was established. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).	NA
feat_typ_d	Feature Type Code Type of cultural resource feature.	MONUMENT, MARKERS, LANDMARKS
feat_desc	Descriptive Text Description of the cultural resource feature	NA
signif_d	Significance Code. Historic significance of the feature.	ART, COMMERCE, ECONOMICS
feat_name	Descriptive Text Description of the cultural resource feature.	NA
off_desig	Maintaining Agency Identifier Code Identifier of the feature as assigned by the maintaining agency.	NA
poc_id	(FK) JOIN to cmgenpoc (Common General, Point of Contact Attribute table). Used to link the feature with a point of contact.	NA

crhstfet:	(Cultural Resources, Historic, Features) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
project_id	(FK) JOIN to cmgenprj (Common General, Project Attribute table) Used to link the record to the appropriate project or contract under which the item was studied, collected, installed, purchased, or managed.	NA
district_id	(FK) JOIN to crhstdst (Common General, Historic District Attribute table) Used to link the record to the appropriate DISTRICT record.	NA
feat_hght	Height Dimension The height of the feature	NA
feat_wid	Width Dimension The width of the feature.	NA
feat_lgth	Length Dimension The length of the feature.	NA
dim_u_d	Dimension Unit Measure Code The unit if measure for the length of the feature.	M=Meter, IN=Inch, FT=Feet
user_flag	User Flag Text An operator defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.	NA
instln_id	(FK) JOIN to cddodins (Cadastre Federal DoD, DoD Property Attribute Table) Used to link the record to the applicable INSTALLATION record.	NA
facil_id	(FK) JOIN to cmgenfac (Common General, Facility Attribute table). Used to link the record to the Facility Record.	NA
grid_value	Graphic Attribute Raster GValue A numeric identification of a raster element in an image or grid that represents the feature.	NA
coord_x	X Coordinate The x component of individual coordinate point.	NA
coord_y	Y Coordinate The y component of individual coordinate point.	NA
coord_z	Z Coordinate The z component of individual coordinate point.	NA
his_typ_d	Type Code A discriminated value for the type of historic monument or landmark.	NATIONAL, OTHER, STATE
perim	Perimeter Dimension The distance around the boundary of the area, zone, or subject item in linear units.	NA
area_u_d	Area Size Unit Measure Code. The unit of measure for area.	SQUARE FOOT, SQUARE INCH, SQUARE MILE

crhstfet:	(Cultural Resources, Historic, Features) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
area_size	Area The size of the area, zone, or polygon in square units.	NA
perim_u_d	Perimeter Unit Measure Code The unit of measure for length	M=Meter, IN=Inch, FT=Feet
rrbridg_id	(FK) JOIN to trrrdbrg - Links the record to TRRRDBRG through (PK)RRBRIDG_ID.	NA
footbrg_id	(FK) JOIN to trpedbrg - Links the record to TRPEDBRG through (PK)FOOTBRG_ID.	NA
bridge_id	(FK) JOIN to trvehbrg - Links the record to TRVEHBRG through (PK)BRIDGE_ID.	NA
buildng_id	(FK) JOIN to bggenstr (Buildings General, Buildings Structure Attribute table) Used to link the record to an associated facility (building, structure).	NA

Table 14. Cultural resource child table CRHSTSTR – cultural resources, historic structure.

Definition: This table contains data about historically significant structures.

crhststr:	(Cultural, Historic, Structure) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
hstbld_id	(PK) Primary Key A unique operator generated alphanumeric identifier assigned to a facility within an installation for identification throughout its life cycle. Historic Building ID.	NA
datalink	Unique Data Identifier Graphic Key. Graphic Key. This attribute normally contains a linking key to an external graphic element. In some systems, this key is managed and populated by the GIS. Care should be taken in modifying this field manually. This is NOT the table's (PK).	NA
map_id	(FK) JOIN to cmgenmap (Common General, Analog and Digital Maps Attribute table) Used to link the record to the appropriate map.	NA
meta_id	(FK) JOIN to cmgenmet (Common General, Metadata Attribute table) Used to link the record to the applicable feature level metadata record(s)	NA

crhststr:	(Cultural, Historic, Structure) – Attribute Definitions <i>(PK) - The primary key of an entity table uniquely identifies each record in the table.</i> <i>(FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.</i>	Domain Examples <i>(Range or Values)</i>
media_id	(FK) JOIN to cmmedmed (Common Media, Common Media Attribute table) Used to link the record to associated multimedia records that reference data such as imagery, video, audio, scanned documents, drawings, and other digital media	NA
coord_id	(FK) JOIN to cmgenrcd (Common General, Positional Location Attribute table). Used to link the record to the appropriate point coordinate record(s).	NA
str_stt_d	Status Code Discriminator. A descriptor for the status of the structure.	LEGEND, RUINS, STANDING
prop_stt_d	Property Usage Status Code - The usage status of the structure.	USABLE, UNKNOWN
rooms	Room Quantity - The number of rooms in the historic structure.	NA
affil_d	Affiliated Artifact Time Code - The cultural prehistoric or historic period with which the artifact is affiliated.	ADENA, CADD0_1, BAYTOWN
arch_sty_d	Architectural Style Code - The code indicating the architectural style of the structure.	BUNGALOW, CLASSIC, CHICAGO
architect	Architect Name - The name of the person or firm that was the architect for the structure.	NA
use_str_d	Use Code - The current use of the structure.	ARMORY, CAPITOL, CLUBHOUSE
disturb_d	Disturbance Level Code - The level of disturbance to the historic structure.	DESTROYED, MAJORIMPACT, NONE
str_design	Designation Name - Primary structure designation. This designation is assigned by the agency with jurisdiction over the structure. The agency is specified in the poc_agency attribute.	NA
habs_num	Historic American Building Survey Number Code - The Historic American Buildings Survey number for the structure.	NA
haer_num	Historic American Engineering Record Number Code - The Historic American Engineering Record number for the structure.	NA
value_d	Value Code - The code indicating the historic value of the structure.	HIGH, HIGHEST, MEDIUM

crhststr:	(Cultural, Historic, Structure) – Attribute Definitions <i>(PK) - The primary key of an entity table uniquely identifies each record in the table.</i> <i>(FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.</i>	Domain Examples <i>(Range or Values)</i>
stru_size	Floor Area - The total floor area of the interior space in the historic structure.	NA
prop_size	Property Grounds Size Area - The total area of any grounds surrounding the historic structure.	NA
prop_u_d	Property Unit Measure Code - Unit of measure for the property surrounding the historic site.	SQUARE FOOT, SQUARE INCH, SQUARE MILE
stt_use_d	Usage Status Code - The usage status of the structure.	RUINS, STANDING
str_desc	Condition Descriptive - Text Description of the condition of the structure.	NA
signif_d	Significance Code - Brief description of the historic significance of the structure.	ART, COMMERCE, ECONOMICS
imp_pri_d	Prior to Discovery Impact Code - The factor that caused the greatest impact to the site prior to discovery.	COMBINED, HISTORICAL, INTACT
imp_fut_d	Future Impact Code - The primary continuing or potential factor that threatens the future integrity of the site.	COMBINED, HISTORICAL, INTACT
mgmt_recom	Mgt Recommendation Descriptive Text - The management recommendation for maintaining and preserving the historic structure.	NA
nreg_cri_d	National Register Criteria Code - The criteria used to nominate the site for National Register of Historic Places status.	A, B, C
nreg_con_d	National Register Consideration Code - Other issues to consider for placement on the National Register of Historic Places.	BIRTHPLACE, GRAVE, RELIGION
nreg_rat_d	National Register Rating Code - National Register of Historic Places rating for the historic value of the site.	HIGH, HIGHEST, MEDIUM
nreg_stt_d	National Register Status Code - Status of placement of site on the National Register of Historic Places.	LISTED, ELIGIBLE, UNKNOWN
stru_u_d	Unit Measure Code - Unit of measure for the interior space in the structure.	SQUARE FOOT, SQUARE INCH, SQUARE MILE

crhststr:	(Cultural, Historic, Structure) – Attribute Definitions <i>(PK) - The primary key of an entity table uniquely identifies each record in the table.</i> <i>(FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.</i>	Domain Examples <i>(Range or Values)</i>
levels	Number of Levels Quantity, the number of stories in the structure, including those below ground level.	NA
municip_id	(FK) JOIN to cmgenmun (Common General, Municipality) Used to link the record to a municipality.	NA
dstrict_id	(FK) JOIN to crhstdst (Cultural Historic, Historic District Attribute table) Used to link the record to the cultural historic district.	NA
area_size	Area, the size of the area, zone, or polygon in square units.	NA
area_u_d	Area Size Unit Measure Code, the unit of measure for area.	SQUARE FOOT, SQUARE INCH, SQUARE MILE
perim	Perimeter Dimension, the distance around the boundary of the area, zone, or subject item in linear units.	NA
perim_u_d	Perimeter Unit Measure Code The unit of measure for length	M=Meter, IN=Inch, FT=Feet
instln_id	(FK) JOIN to cddodins (Cadastre Federal DoD, DoD Property Attribute table) Used to link the record to the applicable INSTALLATION record.	NA
buildng_id	(FK) JOIN to bggenstr (Buildings General, Buildings Structure Attribute table) Used to link the record to an associated facility (building, structure).	NA
project_id	(FK) JOIN to cmgenprj (Common General, Project Attribute table) Used to link the record to the appropriate project or contract under which the item was studied, collected, installed, purchased, or managed.	NA
user_flag	User Flag Text An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.	NA
facil_id	(FK) JOIN to cmgenfac (Common General, Facility Attribute table)Used to link the record to the Facility Record.	NA
grid_value	Graphic Attribute Raster GValue A numeric identification of a raster element in an image or grid that represents the feature.	NA

crhststr:	(Cultural, Historic, Structure) – Attribute Definitions <i>(PK) - The primary key of an entity table uniquely identifies each record in the table.</i> <i>(FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.</i>	Domain Examples <i>(Range or Values)</i>
coord_x	X Coordinate The x component of individual coordinate point.	NA
coord_y	Y Coordinate The y component of individual coordinate point.	NA
coord_z	Z Coordinate The z component of individual coordinate point.	NA
nreg_no	National Historical Registry Number Identifier The number used as a reference for the National Historical Registry.	NA
sur_crs_id	(FK) - Links the record to HYSURCRS through primary key SUR_CRS_ID.	NA
up_riv_mil	The relative mile marker at the up river end of the historic structure.	NA
dn_riv_mil	The relative mile marker at the down river end of the historic structure	NA
agency-id	(FK) - Links the record to CMGENAGC through key AGENCY_ID.	NA
owner-id	(FK) - Links the record to CMGENOWN through primary key OWNER_ID.	NA
setting	A brief description of the environmental setting of the structure.	NA
str_name	Name of the historic structure.	NA
feat_typ_d	Code for the type of cultural resource feature	MONUMENT, MARKERS, LANDMARKS
start_cen	The century portion of the conventional date when the structure was first built. (for 1836=1800)	NA
start_dec	The decade portion of the conventional date when the structure was first built. (for 1836=30)	NA
start_yr	The year portion of the conventional date when the structure was first built. (for 1836=6)	NA
end_cen	The century portion of the conventional date when the structure was last used. (for 1836=1800)	NA

crhststr:	(Cultural, Historic, Structure) – Attribute Definitions <i>(PK) - The primary key of an entity table uniquely identifies each record in the table.</i> <i>(FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.</i>	Domain Examples <i>(Range or Values)</i>
end_dec	The decade portion of the conventional date when the structure was last used. (for 1836=30)	NA
end_yr	The year portion of the conventional date when the structure was last used. (for 1836=6)	NA
address_id	(FK) - Links the record to CMGENADD through primary key ADDRESS_ID.	NA
location	A description of the location if no address is available.	NA
survey_id	(FK) - Links the record to GDSRIPRJ through primary key SURVEY_ID	NA
rec_rep_d	The type of agency serving as the repository of the records for the investigation of the structure.	FEDERAL, SHPO, STATE
loc_rel_d	An indication of the reliability of the artifact's recorded location.	GOOD, NONE, POOR
poc_id	(FK) - Links the record to CMGENPOC through primary key POC_ID	NA
delisted	The date a listing was deleted from the NRHP. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915)	NA
narrative	A description or other unique information concerning the subject item, limited to 240 characters.	NA

Table 15. Cultural resource child table CRGENSPO – historic characteristics structures table.

Definition: This table contains data about historic characteristics of significant structures.

crgenspo:	(Historic characteristics structures table) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
shpo_id	(PK) Identifier A locally assigned identifier for the record.	NA
meta_id	(FK) JOIN to cmgenmet Used to link the record to the applicable feature level metadata record(s).	NA
media_id	(FK) JOIN to cmmedmed Used to link the record to associated multimedia records that reference data such as imagery, video, audio, scanned documents, drawings, and other digital media.	NA
poc_id	(FK) JOIN to cmgenpoc - Links the record to CMGENPOC through (PK) POC_ID.	NA
address_id	(FK) JOIN to cmgenadd - Links the record to CMGENADD through (PK) ADDRESS_ID.	NA
project_id	(FK) JOIN to cmgenprj - Links the record to CMGENPRJ through (PK) PROJECT_ID.	NA
parcel_id	(FK) JOIN to cdrelpar - Links the record to CDRELPAR through (PK) PARCEL_ID.	NA
date_prep	Prepared Date The date the SHPO form was prepared. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).	NA
state_d	State Code Name of the state.	IL, AK, CO, NY
shpocode_d	Survey Code The code which denotes how the site was surveyed.	CRM, PROB, OTHER
instln_id	(FK) JOIN to cddodins Used to link the record to the applicable INSTALLATION record.	NA
facil_id	(FK) JOIN to cmgenfac Used to link the record to the Facility Record.	NA
user_flag	User Flag Text An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.	NA

Table 16. Cultural resource child table CRHSTDST– cultural resources, historic district.

Definition: This table contains data about historic districts.

crhstdst:	(Cultural Resources, Historic, District) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
district_id	(PK) Identifier A unique, user defined identifier for each record or instance of an entity.	NA
datalink	Unique Data Identifier Graphic Key. This attribute normally contains a linking key to an external graphic element. In some systems, this key is managed and populated by the GIS. Care should be taken in modifying this field manually. This is NOT the table's (PK).	NA
map_id	(FK) JOIN to cmgenmap (Common General, Analog and Digital Maps Attribute table) Used to link the record to the appropriate map.	NA
meta_id	(FK) JOIN to cmgenmet (Common General, Metadata Attribute table) Used to link the record to the applicable feature level metadata record(s).	NA
media_id	(FK) JOIN to cmmedmed (Common Media, Common Media Attribute table) Used to link the record to associated multimedia records that reference data such as imagery, video, audio, scanned documents, drawings, and other digital media.	NA
coord_id	(FK) JOIN to cmgenrcrd (Common General, Positional Location Attribute table). Used to link the record to the appropriate point coordinate record(s).	NA
arch_sty_d	Architectural Style Code The code which indicates the architectural style of the district.	BUNGALOW, CLASSIC, CHICAGO
cond_desc	Condition Description Name Description of the condition of the district.	NA
cond_dst_d	Condition Code Code that indicates the condition of the district.	CONDEMNED, DAMAGED
dist_desc	Description Name Brief description of the historic significance of the district.	NA
dist_design	Designation Identifier This designation is assigned by the agency with jurisdiction over the district. The agency is specified in the poc_num attribute.	NA
value_d	Value Code The code indicating the historic value of the district.	HIGH, HIGHEST, MEDIUM
signif_d	Significance Code The cultural area or field where this district is most significant.	ART, COMMERCE, ECONOMICS
imp_pri_d	Prior to Discovery Impact Code The factor that caused the greatest impact to the site prior to discovery.	COMBINED, HISTORICAL, INTACT

crhstdst:	(Cultural Resources, Historic, District) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
imp_fut_d	Future Impact Code The primary continuing or potential factor that threatens the future integrity of the site.	COMBINED, HISTORICAL, INTACT
dist_name	District Name. Name of the historic district.	NA
nreg_cri_d	National Register Criteria Code The criteria used to nominate the district for National Register of Historic Places status.	A, B, C
nreg_con_d	National Register Consideration Code Other issues to consider for placement on the National Register of Historic Places.	BIRTHPLACE, GRAVE, RELIGION
nreg_rat_d	National Register Rating Code National Register of Historic Places rating for the historic value of the district.	HIGH, HIGHEST, MEDIUM
nreg_stt_d	National Register Status Code Status of placement of the district on the National Register of Historic Places.	LISTED, ELIGIBLE, UNKNOWN
municip_id	(FK) JOIN to cmgenmun (Common General, Municipality Attribute table) Used to link the record to a particular jurisdiction.	NA
poc_id	(FK) JOIN to cmgenpoc (Common General, Point of Contact Attribute table) Used to link the district with a point of contact.	NA
area_size	Area. The size of the area, zone, or polygon in square units.	NA
area_u_d	Area Size Unit Measure Code. The unit of measure for area	SQUARE FOOT, SQUARE INCH, SQUARE MILE
perim	Perimeter Dimension The distance around the boundary of the area, zone, or subject item in linear units.	NA
perim_u_d	Perimeter Unit Measure Code The unit of measure for length	M=Meter, IN=Inch, FT=Feet
instln_id	(FK) JOIN to cddodins (Cadastre Federal DoD, DoD installations Attribute Table) Used to link the record to the applicable INSTALLATION record.	NA
project_id	(FK) JOIN to cmgenprj (Common General, Project Attribute table) Used to link the record to the appropriate project or contract under which the item was studied, collected, installed, purchased, or managed.	NA

crhstdst:	(Cultural Resources, Historic, District) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
user_flag	User Flag Text An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.	NA
facil_id	(FK) JOIN to cmgenfac (Common General, Facility Attribute table)Used to link the record to the Facility Record.	NA
grid_value	Graphic Attribute Raster GValue A numeric identification of a raster element in an image or grid that represents the feature.	NA
coord_x	X Coordinate The x component of individual coordinate point.	NA
coord_y	Y Coordinate The y component of individual coordinate point.	NA
coord_z	Z Coordinate The z component of individual coordinate point.	NA
nreg_no	National Historical Registry Number Identifier The number used as a reference for the National Historical Registry.	NA
sur_crs_id	(FK) - Links the record to HYSURCRS through primary key SUR_CRS_ID.	NA
up_riv_mil	The relative river mile mark at the upper end of the district area.	NA
dn_riv_mil	The relative river mile mark at the lower end of the district area.	NA
setting	A brief description of the environmental setting of the district area.	NA
affil_d	The cultural prehistoric or historic period with which the artifact is affiliated.	ADENA, CADDO_1, BAYTOWN
start_cen	The century portion of the conventional date when the district was first established. (for 1836=1800)	NA
start_dec	The decade portion of the conventional date when the district was first established. (for 1836=30)	NA
start_yr	The year portion of the conventional date when the district was first established. (for 1836=6)	NA
end_cen	The century portion of the conventional date when the was last used. (for 1836-1800)	NA
end_dec	The decade portion of the conventional date when the district was last used. (for 1836=30)	NA
end_yr	The year portion of the conventional date when the district was last used. (for 1836=6)	NA

crhstdst:	(Cultural Resources, Historic, District) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
disturb_d	The code representing the level of disturbance of the district.	DESTROYED, MAJORIMPACT, NONE
survey_id	(FK) - Links the record to GDSRIPRJ through primary key SURVEY_ID.	NA
rec_rep_d	The type of agency serving as the repository of the records for the investigation of the district.	FEDERAL, SHPO, STATE
loc_rel_d	An indication of the reliability of the artifact's recorded location.	GOOD, NONE, POOR
delisted	The date a listing was deleted from the NRHP. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).	NA
narrative	A description or other unique information concerning the subject item, limited to 240 characters.	NA

Table Name: **crgenhst** – Cultural Resources, general chronology

Definition: This table contains information about chronology of historically significant items.

Join Relationships: **Cultural Resource Child Tables to Parent (crgenhst)**

In addition to a chronology being described by all the data attributes in the chronology table (crgenhst), chronology is further described by all data attributes in its associated child table.

crgenrefer – This table contains data about the cited information or documentation of historically significant sites.

All Parent Tables to Child **cmgenhst**

The data contained in child tables can be directly queried by associated parent tables.

bggenstr – This table contains data about man-made structures that were created to protect man and possessions from the environment; or to enhance man's activities.

cmgenmet – This table contains attribute table level metadata, data about the attribute data which identifies items like who collected the data, when it was collected, and the accuracy of the data.

cmmedmed – This table contains information about any external image, graphic, cad file, or other representation of the feature.

cddoins – This table contains data about Department of Defense Installations.

cmgenfac – Real property, having a specified use, that is built or maintained by people.

lsndcem – This table contains information about areas containing one or more human grave sites.

trrrdbrg – This table contains data about railroad bridges.

trvehbrg – This table contains information about vehicle bridges.

trpedbrg – This table contains data about pedestrian bridges.

crngenchr – This table contains information about the characteristics of historically significant structures.

Table 17. Parent table CRGENHST – cultural resources, general chronology.

crgenhst:	(Cultural Resources, General, Chronology) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
hst_chr_id	(PK) Identifier. A unique, user defined identifier for each record or instance of an entity.	NA
meta_id	(FK) JOIN to cmgenmet. Used to link the record to the applicable feature level metadata record(s).	NA
date_event	Event Date The date of the chronological event. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).	NA
cond_str_d	Structure Condition Code that indicates the condition of the structure.	DAMAGED, CRACKED, HABITABLE
evn_typ_d	Event Type Code Type of chronological event.	BATTLE, DEMONSTRATION, SPEECH
impact_d	Integrity Impact Code The impact that threatens the integrity of the structure.	AGRICULTURE, INTACT, SPOIL_PILE
function_d	Function Code The function of the structure during the chronological period.	ARMORY, CAPITOL, CLUBHOUSE
event_desc	Event Description Text Brief description of the chronological event.	NA
Source	Descriptive Text Source of information on event.	NA
Narrative	Narrative Text A description or other unique information concerning the subject item, limited to 240 characters.	NA
crm_str_id	(FK) JOIN to crgenchr Used to link the record to the Entity record. A unique, user defined identifier for each record or instance of an entity.	NA
building_id	(FK) JOIN to bggenstr . Used to link the record to an associated facility (building, structure).	NA
user_flag	User Flag Text An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.	NA
facil_id	(FK) JOIN to cmgenfac Used to link the record to the Facility Record.	NA
instln_id	(FK) JOIN to cddodins Used to link the record to the applicable INSTALLATION record.	NA
media_id	(FK) JOIN to cmmedmed Used to link the record to associated multimedia records that reference data such as imagery, video, audio, scanned documents, drawings, and other digital media	NA
rrbridg_id	(FK) JOIN to trrrdbrg - Links the record to TRRRDBRG through (PK)RRBRIDG_ID.	NA
footbrg_id	(FK) JOIN to trpedbrg - Links the record to TRPEDBRG through (PK)FOOTBRG_ID.	NA

crgenhst:	(Cultural Resources, General, Chronology) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
bridge_id	(FK) JOIN to trvehbrg - Links the record to TRVEHBRG through (PK)BRIDGE_ID.	NA
cemetery_id	(FK) JOIN to lscndcem - Links the record to LSCNDCEM through (PK)CEMETRY_ID.	NA

Table 18. Cultural resource child table CRGENREF – cultural resources, general, reference documentation.

Definition: This table contains data about the cited information or documentation of historically significant sites.

crgenref:	(Cultural Resources, General, Reference Documentation) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
refer_id	(PK) Identifier A unique, user defined identifier for each record or instance of an entity.	NA
meta_id	(FK) JOIN to cmgenmet Used to link the record to the applicable feature level metadata record(s).	NA
date_acqrd	Acquired Date The date the reference was acquired. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).	NA
date_pub	Published Date The date the reference was published or released. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).	NA
title	Title Name The title of the reference.	NA
ref_typ_d	Reference Type Code The type of reference. (journal, map, oral history).	LETTER, MAP, JOURNAL
source	Source Descriptive Text The source of the reference such as the name of the journal in which the reference was printed.	NA
auth_name	Author(s) Name Name of the author(s) of the reference.	NA
narrative	Narrative Text A description or other unique information concerning the subject item, limited to 240 characters.	NA

crgenref:	(Cultural Resources, General, Reference Documentation) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
crm_sty_id	(FK) JOIN to crmgststy Used to link the record with the applicable study area.	NA
hst_chr_id	(FK) JOIN to crgenhst Used to link the record to the appropriate historic record.	NA
crm_str_id	(FK) JOIN to crgenchr Used to link the record to the Entity record.	NA
user_flag	User Flag Text An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.	NA
restrict_d	Restriction Constituted Boolean Value Code A Boolean indicating whether or not the document or reference constitutes a restriction.	YES, NO
facil_id	(FK) JOIN to cmgenfac Used to link the record to the Facility Record.	NA
instln_id	(FK) JOIN to cddodins Used to link the record to the applicable INSTALLATION record.	NA
media_id	(FK) JOIN to cmmedmed Used to link the record to associated multimedia records that reference data such as imagery, video, audio, scanned documents, drawings, and other digital media.	NA
federal_d	Federal Boolean Code A Boolean indicating whether the data is located at a federal agency.	YES, NO
local_d	Local Boolean Code A Boolean indicating whether the data is located at a local government agency.	YES, NO
univ_d	University Boolean Code A Boolean indicating whether the data is located at a university.	YES, NO
state_d	State Boolean Code A Boolean indicating whether the data is located at a state agency.	YES, NO
site_id	(FK) JOIN to crarcsit - Links the record to CRARCSIT through (PK)SITE_ID.	NA
dstrict_id	(FK) JOIN to crhstdst - Links the record to CRHSTDST through (PK)DSTRCT_ID.	NA

Table Name: **crhstdst**– Cultural historic district

Definition: This table contains information about historic districts.

Join Relationships: **Cultural Resource Child Tables to Parent (crhstdst)**

In addition to a district being described by all the data attributes in the historic district table (crhstdst), a district is further described by all data attributes in its associated child tables.

bggenstr – This table contains data about man-made structures that were created to protect man and possessions from the environment; or to enhance man's activities.

cmgenadd – This table contains information about addresses.

crhstfet – This table contains information about historic features

crhststr – This table contains information about cultural historic structures

crngenref – This table contains data about the cited information or documentation of historically significant sites

crmgtres – This table contains data about areas where activity is restricted due to their historic or cultural significance.

lsndcem – This table contains information about areas containing one or more human grave sites

(Not Included - Not Applicable to Historic Buildings or Structures)

trrrdbrg – This table contains data about railroad bridges. (Not Included - will be addressed in Phase II FY03)

trvehbrg – This table contains information about vehicle bridges. (Not Included - will be addressed in Phase II FY03)

trpedbrg – This table contains data about pedestrian bridges. (Not Included - will be addressed in Phase II FY03)

All Parent Tables to Child crhstdst

The data contained in child tables can be directly queried by associated parent tables.

cddoins – This table contains data about Department of Defense Installations.

cmgenocrd – This table describes the positional location of points and nodes.

cmgenfac – Real property, having a specified use, that is built or maintained by people.

cmgenmap – This table contains information about digital and analog maps.

cmgenmet – This table contains attribute table level metadata, data about the attribute data which identifies items like who collected the data, when it was collected, and the accuracy of the data.

cmgenmun – This table contains information about various municipalities, such as towns cities or villages.

cmgenpoc – This table contains information about individuals, personnel, and points of contact.

cmgenpri – This table contains information about projects.

cmmedmed – This table contains information about any external image, graphic, cad file, or other representation of the feature.

gdsriprj – This table contains information about geodetic survey projects and sub-projects.

hysurcrs – This table contains data about surface water courses.

Table 19. Parent table CRHSTDST – cultural resources, historic district.

crhstdst:	(Cultural Resources, Historic, District) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
district_id	(PK) Identifier A unique, user defined identifier for each record or instance of an entity.	NA
datalink	Unique Data Identifier Graphic Key. This attribute normally contains a linking key to an external graphic element. In some systems, this key is managed and populated by the GIS. Care should be taken in modifying this field manually. This is NOT the table's (PK).	NA
map_id	(FK) JOIN to cmgenmap (Common General, Analog and Digital Maps Attribute table) Used to link the record to the appropriate map.	NA
meta_id	(FK) JOIN to cmgenmet (Common General, Metadata Attribute table) Used to link the record to the applicable feature level metadata record(s).	NA
media_id	(FK) JOIN to cmmedmed (Common Media, Common Media Attribute table) Used to link the record to associated multimedia records that reference data such as imagery, video, audio, scanned documents, drawings, and other digital media.	NA
coord_id	(FK) JOIN to cmgenchr (Common General, Positional Location Attribute table). Used to link the record to the appropriate point coordinate record(s).	NA
arch_sty_d	Architectural Style Code The code which indicates the architectural style of the district.	BUNGALOW, CLASSIC, CHICAGO
cond_desc	Condition Description Name Description of the condition of the district.	NA
cond_dst_d	Condition Code Code that indicates the condition of the district.	CONDEMNED, DAMAGED
dist_desc	Description Name Brief description of the historic significance of the district.	NA
dist_design	Designation Identifier This designation is assigned by the agency with jurisdiction over the district. The agency is specified in the poc_num attribute.	NA
value_d	Value Code The code indicating the historic value of the district.	HIGH, HIGHEST, MEDIUM
signif_d	Significance Code The cultural area or field where this district is most significant.	ART, COMMERCE, ECONOMICS
imp_pri_d	Prior to Discovery Impact Code The factor that caused the greatest impact to the site prior to discovery.	COMBINED, HISTORICAL, INTACT
imp_fut_d	Future Impact Code The primary continuing or potential factor that threatens the future integrity of the site.	COMBINED, HISTORICAL, INTACT

crhstdst:	(Cultural Resources, Historic, District) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
dist_name	District Name. Name of the historic district.	NA
nreg_cri_d	National Register Criteria Code The criteria used to nominate the district for National Register of Historic Places status.	A, B, C
nreg_con_d	National Register Consideration Code Other issues to consider for placement on the National Register of Historic Places.	BIRTHPLACE, GRAVE, RELIGION
nreg_rat_d	National Register Rating Code National Register of Historic Places rating for the historic value of the district.	HIGH, HIGHEST, MEDIUM
nreg_stt_d	National Register Status Code Status of placement of the district on the National Register of Historic Places.	LISTED, ELIGIBLE, UNKNOWN
municip_id	(FK) JOIN to cmgenmun (Common General, Municipality Attribute table) Used to link the record to a particular jurisdiction.	NA
poc_id	(FK) JOIN to cmgenpoc (Common General, Point of Contact Attribute table) Used to link the district with a point of contact.	NA
area_size	Area. The size of the area, zone, or polygon in square units.	NA
area_u_d	Area Size Unit Measure Code. The unit of measure for area	SQUARE FOOT, SQUARE INCH, SQUARE MILE
perim	Perimeter Dimension The distance around the boundary of the area, zone, or subject item in linear units.	NA
perim_u_d	Perimeter Unit Measure Code The unit of measure for length	M=Meter, IN=Inch, FT=Feet
instln_id	(FK) JOIN to cddodins (Cadastre Federal DoD, DoD installations Attribute Table) Used to link the record to the applicable INSTALLATION record.	NA
project_id	(FK) JOIN to cmgenprj (Common General, Project Attribute table) Used to link the record to the appropriate project or contract under which the item was studied, collected, installed, purchased, or managed.	NA

crhstdst:	(Cultural Resources, Historic, District) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
user_flag	User Flag Text An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.	NA
facil_id	(FK) JOIN to cmgenfac (Common General, Facility Attribute table)Used to link the record to the Facility Record.	NA
grid_value	Graphic Attribute Raster GValue A numeric identification of a raster element in an image or grid that represents the feature.	NA
coord_x	X Coordinate The x component of individual coordinate point.	NA
coord_y	Y Coordinate The y component of individual coordinate point.	NA
coord_z	Z Coordinate The z component of individual coordinate point.	NA
nreg_no	National Historical Registry Number Identifier The number used as a reference for the National Historical Registry.	NA
sur_crs_id	(FK) - Links the record to HYSURCRS through primary key SUR_CRS_ID.	NA
up_riv_mil	The relative river mile mark at the upper end of the district area.	NA
dn_riv_mil	The relative river mile mark at the lower end of the district area.	NA
setting	A brief description of the environmental setting of the district area.	NA
affil_d	The cultural prehistoric or historic period with which the artifact is affiliated.	ADENA, CADDO_1, BAYTOWN
start_cen	The century portion of the conventional date when the district was first established. (for 1836=1800)	NA
start_dec	The decade portion of the conventional date when the district was first established. (for 1836=30)	NA
start_yr	The year portion of the conventional date when the district was first established. (for 1836=6)	NA
end_cen	The century portion of the conventional date when the was last used. (for 1836-1800)	NA
end_dec	The decade portion of the conventional date when the district was last used. (for 1836=30)	NA
end_yr	The year portion of the conventional date when the district was last used. (for 1836=6)	NA

crhstdst:	(Cultural Resources, Historic, District) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
disturb_d	The code representing the level of disturbance of the district.	DESTROYED, MAJORIMPACT, NONE
survey_id	(FK) - Links the record to GDSRIPRJ through primary key SURVEY_ID.	NA
rec_rep_d	The type of agency serving as the repository of the records for the investigation of the district.	FEDERAL, SHPO, STATE
loc_rel_d	An indication of the reliability of the artifact's recorded location.	GOOD, NONE, POOR
delisted	The date a listing was deleted from the NRHP. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).	NA
narrative	A description or other unique information concerning the subject item, limited to 240 characters.	NA

Table 20. Cultural resource child table BGGENSTR – buildings, general structure.

Definition: This table contains data about man-made structures that were created to protect man and possessions from the environment; or to enhance man's activities.

bggenstr :	(Buildings, General, Structure) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
building_id	(PK) Identifier. A unique operator generated alphanumeric identifier assigned to a facility within an installation for identification throughout its life cycle.	NA
datalink	Unique Data Identifier Graphic Key. This attribute normally contains a linking key to an external graphic element. In some systems, this key is managed and populated by the GIS. Care should be taken in modifying this field manually. This is NOT the table's (PK).	NA
map_id	(FK) JOIN to cmgenmap. Used to link the record to the appropriate map.	NA
meta_id	(FK) JOIN to cmgenmet. Used to link the record to the applicable feature level metadata record(s).	NA
media_id	(FK) JOIN to cmmedmed. Used to link the record to associated multimedia records that reference data such as imagery, video, audio, scanned documents, drawings, and other digital media.	NA

bggenstr :	(Buildings, General, Structure) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
coord_id	(FK) JOIN to cmgenchr. Used to link the record to the appropriate point coordinate record(s).	NA
structname	Common Name. Common name given to the structure	NA
str_stat_d	Status Code Discriminator. This value differentiates structure entities by operational status.	DEMOLITION, EXISTING ,PERMANENT, PORTABLE, SEMI_PERM, TEMPORARY
towr_use_d	Tower Use Code Discriminator. This value differentiates tower structure entities by operational use.	CONTROL, FIRE, OBSERVATION
str_type_d	Type Code The type of structure.	APARTMENT, BARN, CHURCH, CONDO
str_use_d	Use Code. The present use of the structure.	ABANDONED, AGRICULTURE, CAPITOL, COURTHOUSE
str_cnd_d	Condition Code. The condition of the structure.	CRACKED, DAMAGED, CONDEMED
designcode	Design Code. Department of Defense as-designed structure use code	NA
presntcode	Use Descriptive Text. Department of Defense current structure use code	NA
heattype_d	Heating Type Code. Type of heating service to the structure	NA
cooltype_d	Cooling Type Code. Type of cooling service to the structure	NA
no_occup	Occupant Amount. Number of persons currently occupying the structure	NA
areainside	Inside Area. Total inside area of structure	NA
areafloor	Floor Area. Total inside floor area	NA
areausable	Usable Area. Total inside useable area	NA
areaperocc	Occupant Useable Area. Total inside useable area per number of occupants	NA
areagndcov	Ground Covered By Structure Area. Area of the ground covered by the structure	NA
areas_u_d	Areas Unit Measure Code. Unit of measure associated with structure areas	SQUARE FOOT, SQUARE INCH, SQUARE MILE
structght	Height Dimension. Maximum height of structure	NA
height_u_d	Height Unit Measure Code. Unit of measure associated with the height of the structure	M=Meter, IN=Inch, FT=Feet

bggenstr :	(Buildings, General, Structure) – Attribute Definitions <i>(PK) - The primary key of an entity table uniquely identifies each record in the table.</i> <i>(FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.</i>	Domain Examples <i>(Range or Values)</i>
floor_elev	Floor Dimension. Elevation of the floor of the ground level story of a structure	NA
elev_u_d	Elevation Unit Measure Code. Unit of measure associated with the floor elevation of the structure.	M=Meter, IN=Inch, FT=Feet
portbl_wgt	Portable Weight Quantity. Weight of the structure, if portable.	NA
weight_u_d	Weight Unit Measure Code. Unit of measure associated with the weight of a portable structure.	KG=KILOGRAMS, LB=POUNDS
no_levels	Level Amount. Number of structural levels/stories (including stories below ground level)	NA
built_date	Built Date. The date on which the structure was first opened for use. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).	NA
occup_date	Occupation Date. The date on which the structure was occupied by the current residents. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).	NA
movin_date	Move In Date. The projected date the occupants will move out of the structure. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).	NA
inspc_date	Inspection Date. The date on which the structure was last inspected. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).	NA
demol_date	Demolition Date. The date on which the structure will be demolished and no longer used. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).	NA
address_id	(FK) JOIN to cmgenadd. Used to link the record to an associated address record.	NA
dstrict_id	(FK) JOIN to crhstdst. Used to link the record to an associated historic district, where appropriate.	NA
landuse_id	(FK) JOIN to lscndlus. Used to link the record to an associated land use record.	NA
instln_id	(FK) JOIN to cddodins. Used to link the record to the applicable INSTALLATION record.	NA
project_id	(FK) JOIN to cmgenprj. Used to link the record to the appropriate project or contract under which the item was studied, collected, installed, purchased, or managed.	NA
narrative	Narrative Text. A description or other unique information concerning the subject item, limited to 240 characters.	NA

bggenstr :	(Buildings, General, Structure) – Attribute Definitions <i>(PK) - The primary key of an entity table uniquely identifies each record in the table.</i> <i>(FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.</i>	Domain Examples <i>(Range or Values)</i>
user_flag	User Flag Text An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.	NA
str_use2_d	Secondary Use Code. A secondary use code for the structure.	APARTMENT, BARN, CHURCH, CONDO
area_size	Area. The size of the area, zone, or polygon in square units.	NA
area_u_d	Area Size Unit Measure Code. The unit of measure for area.	SQUARE FOOT, SQUARE INCH, SQUARE MILE
Perim	Perimeter Dimension. The distance around the boundary of the area, zone, or subject item in linear units.	NA
perim_u_d	Perimeter Unit Measure Code The unit of measure for length	M=Meter, IN=Inch, FT=Feet
vehwei_id	(FK) JOIN to trvehwei. Used to link the record to the applicable weigh station record.	NA
str_mat_d	Material Code. The construction type of material used in the building.	BRICK, CANVAS, CEMENT
facil_id	(FK) JOIN to cmgenfac. Used to link the record to the Facility Record.	NA
grid_value	Graphic Attribute Raster Gvalue. A numeric identification of a raster element in an image or grid that represents the feature.	NA
rrdstat_id	(FK) JOIN to trrrdsta. Used to link the record to any applicable railroad station, where a building, or buildings, are present.	NA
fut_stat_d	Future Structure Code Discriminator. Used with structure_future_site to define the status of the planned building.	FUTURE_DEV, UNDER_CONST
coord_x	X Coordinate. The x component of individual coordinate point.	NA
coord_y	Y Coordinate. The y component of individual coordinate point.	NA
coord_z	Z Coordinate. The z component of individual coordinate point.	NA
owner_id	(FK) JOIN to cmgenown. Used to link the record to the owner.	NA
sur_crs_id	(FK) JOIN to hysurcrs. A unique, user defined identifier for each record or instance of an entity.	NA

bggenstr :	(Buildings, General, Structure) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
river_mile	River Mile Reference. Dimension River mile marker.	NA
value_cont	Contents Amount. Value of the contents.	NA
a_cost	Actual Total Amount. An actual total cost for completing the activity. Round off to nearest thousand dollars.	NA
isr_code_d	ISR Code. The Installation Status Report color code.	AMBER, GREEN, RED
buildng_no	Number Code. The code indicating the number of the building.	NA
facil_no	Facility Number. The actual building number on the physical structure (NFADB facno)	NA
date_acqrd	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).	NA
prv_cost	The replacement cost of a facility, to the fivefoot line, calculated in today's dollars with today's standards for design and construction. It includes supervision, inspection and overhead (SIOH) costs as well as design costs. PRV is calculated by DoD component using the OSD-developed formula as follows: $PRV = (Facility\ Quantity \times Construction\ Cost\ Factor \times Area\ Cost\ Factor) \times 1.2$, where Facility Quantity is the Primary Unit of Measure quantity; Area Cost Factor is the adjustment applied for geographical location; and 1.2 is a 20% adjustment for SIOH and design costs.	NA
date_prv	The date the plant replacement value was last calculated. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).	NA

Table 21. Cultural resource child table CMGENADD – common, general, address.

Definition: This table contains information about addresses.

cmgenadd :	(Common, General, Address) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
address_id	(PK) Identifier A unique user defined identifier for each record or instance of an entity.	NA
meta_id	(FK) Used to link the record to the applicable feature level metadata record(s).	NA
add_type_d	Type of address (e.g., Federal Government, Business, Home).	HOME, BUSINESS, OTHER
phone	Telephone Number for the address point of contact.	NA
fax	Fax Machine Number for the address point of contact.	NA
building_no	Building number used in address.	NA
p_o_box	Post Office box number.	NA
ruralroute	The rural route of an address (if needed).	NA
address_1	The first line of the address.	NA
address_2	The second line of the address (if needed).	NA
city_name	The city or town in which the address is located.	NA
state_d	The state in which the address is located.	IL, AK, CO, NY
zip_code	The zip code of the address.	NA
county_id	(FK). Used to link the buffer area with the surrounding county or municipality.	NA
country_d	The country in which the address is located.	CANADA, MEXICO, USA, Other
e_mail_no	Electronic Mail Address	NA
e_mail_typ	Type of e-mail used (e.g., CompuServe, internet, etc.).	NA
webaddress	World Wide Web Internet Address.	NA
ftpaddress	Ftp Address.	NA
acctlogin	Login for FTP Account.	NA
acctpasswd	Password for FTP Account.	NA
narrative	A description or other unique information concerning the subject item, limited to 240 characters.	NA

cmgenadd :	(Common, General, Address) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
user_flag	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.	NA
media_id	Foreign Key. Used to link the record to associated multimedia records that reference data such as imagery, video, audio, scanned documents, drawings, and other digital media.	NA
district_id	(FK) - Links the record to CRHSTDST through primary key DSTRCT_ID.	NA
osd_city	In the US, the four-character digit code for the metropolitan area closest to the site. (If not in the U.S., use "9999".)	NA

Table 22. Cultural resource child table CRHSTFET– cultural resources, historic, features.

Definition: This table contains data about historic features.

crhstfet:	(Cultural Resources, Historic, Features) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
crmfeat_id	(PK) Identifier A unique, user defined identifier for each record or instance of an entity.	NA
datalink	Unique Data Identifier Graphic Key. This attribute normally contains a linking key to an external graphic element. In some systems, this key is managed and populated by the GIS. Care should be taken in modifying this field manually. This is NOT the table's (PK).	NA
map_id	(FK) JOIN to cmgenmap (Common General, Analog and Digital Maps Attribute table) Used to link the record to the appropriate map.	NA
meta_id	(FK) JOIN to cmgenmet (Common General, Metadata Attribute table) Used to link the record to the applicable feature level metadata record(s).	NA
media_id	(FK) JOIN to cmmedmed (Common Media, Common Media Attribute table) Used to link the record to associated multimedia records that reference data such as imagery, video, audio, scanned documents, drawings, and other digital media.	NA

crhstfet:	(Cultural Resources, Historic, Features) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
coord_id	(FK) JOIN to cmgencrd (Common General, Positional Location Attribute table). Used to link the record to the appropriate point coordinate record(s).	NA
date_estab	Established Date The date the feature was established. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).	NA
feat_typ_d	Feature Type Code Type of cultural resource feature.	MONUMENT, MARKERS, LANDMARKS
feat_desc	Descriptive Text Description of the cultural resource feature	NA
signif_d	Significance Code. Historic significance of the feature.	ART, COMMERCE, ECONOMICS
feat_name	Descriptive Text Description of the cultural resource feature.	NA
off_desig	Maintaining Agency Identifier Code Identifier of the feature as assigned by the maintaining agency.	NA
poc_id	(FK) JOIN to cmgenpoc (Common General, Point of Contact Attribute table). Used to link the feature with a point of contact.	NA
project_id	(FK) JOIN to cmgenprj (Common General, Project Attribute table) Used to link the record to the appropriate project or contract under which the item was studied, collected, installed, purchased, or managed.	NA
dstrict_id	(FK) JOIN to crhstdst (Common General, Historic District Attribute table) Used to link the record to the appropriate DISTRICT record.	NA
feat_hght	Height Dimension The height of the feature	NA
feat_wid	Width Dimension The width of the feature.	NA
feat_lgth	Length Dimension The length of the feature.	NA
dim_u_d	Dimension Unit Measure Code The unit if measure for the length of the feature.	M=Meter, IN=Inch, FT=Feet
user_flag	User Flag Text An operator defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.	NA
instln_id	(FK) JOIN to cddodins (Cadastre Federal DoD, DoD Property Attribute Table) Used to link the record to the applicable INSTALLATION record.	NA

crhstfet:	(Cultural Resources, Historic, Features) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
facil_id	(FK) JOIN to cmgenfac (Common General, Facility Attribute table). Used to link the record to the Facility Record.	NA
grid_value	Graphic Attribute Raster GValue A numeric identification of a raster element in an image or grid that represents the feature.	NA
coord_x	X Coordinate The x component of individual coordinate point.	NA
coord_y	Y Coordinate The y component of individual coordinate point.	NA
coord_z	Z Coordinate The z component of individual coordinate point.	NA
his_typ_d	Type Code A discriminated value for the type of historic monument or landmark.	NATIONAL, OTHER, STATE
perim	Perimeter Dimension The distance around the boundary of the area, zone, or subject item in linear units.	NA
area_u_d	Area Size Unit Measure Code. The unit of measure for area.	SQUARE FOOT, SQUARE INCH, SQUARE MILE
area_size	Area The size of the area, zone, or polygon in square units.	NA
perim_u_d	Perimeter Unit Measure Code The unit of measure for length	M=Meter, IN=Inch, FT=Feet
rrbridg_id	(FK) JOIN to trrrdbrg - Links the record to TRRRDBRG through (PK)RRBRIDG_ID.	NA
footbrg_id	(FK) JOIN to trpedbrg - Links the record to TRPEDBRG through (PK)FOOTBRG_ID.	NA
bridge_id	(FK) JOIN to trvehbrg - Links the record to TRVEHBRG through (PK)BRIDGE_ID.	NA
buildng_id	(FK) JOIN to bggenstr (Buildings General, Buildings Structure Attribute table) Used to link the record to an associated facility (building, structure).	NA

Table 23. Cultural resource child table CRHSTSTR – cultural resources, historic structure.

Definition: This table contains data about historically significant structures.

crhststr:	(Cultural, Historic, Structure) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
hstbld_id	(PK) Primary Key A unique operator generated alphanumeric identifier assigned to a facility within an installation for identification throughout its life cycle. Historic Building ID.	NA
datalink	Unique Data Identifier Graphic Key. Graphic Key. This attribute normally contains a linking key to an external graphic element. In some systems, this key is managed and populated by the GIS. Care should be taken in modifying this field manually. This is NOT the table's (PK).	NA
map_id	(FK) JOIN to cmgenmap (Common General, Analog and Digital Maps Attribute table) Used to link the record to the appropriate map.	NA
meta_id	(FK) JOIN to cmgenmet (Common General, Metadata Attribute table) Used to link the record to the applicable feature level metadata record(s)	NA
media_id	(FK) JOIN to cmmedmed (Common Media, Common Media Attribute table) Used to link the record to associated multimedia records that reference data such as imagery, video, audio, scanned documents, drawings, and other digital media	NA
coord_id	(FK) JOIN to cmgencrd (Common General, Positional Location Attribute table). Used to link the record to the appropriate point coordinate record(s).	NA
str_stt_d	Status Code Discriminator. A descriptor for the status of the structure.	LEGEND, RUINS, STANDING
prop_stt_d	Property Usage Status Code - The usage status of the structure.	USABLE, UNKNOWN
rooms	Room Quantity - The number of rooms in the historic structure.	NA
affil_d	Affiliated Artifact Time Code - The cultural prehistoric or historic period with which the artifact is affiliated.	ADENA, CADD0_1, BAYTOWN
arch_sty_d	Architectural Style Code - The code indicating the architectural style of the structure.	BUNGALOW, CLASSIC, CHICAGO
architect	Architect Name - The name of the person or firm that was the architect for the structure.	NA
use_str_d	Use Code - The current use of the structure.	ARMORY, CAPITOL, CLUBHOUSE
disturb_d	Disturbance Level Code - The level of disturbance to the historic structure.	DESTROYED, MAJORIMPACT, NONE

crhststr:	(Cultural, Historic, Structure) – Attribute Definitions <i>(PK) - The primary key of an entity table uniquely identifies each record in the table.</i> <i>(FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.</i>	Domain Examples (Range or Values)
str_design	Designation Name - Primary structure designation. This designation is assigned by the agency with jurisdiction over the structure. The agency is specified in the poc_agency attribute.	NA
habs_num	Historic American Building Survey Number Code - The Historic American Buildings Survey number for the structure.	NA
haer_num	Historic American Engineering Record Number Code - The Historic American Engineering Record number for the structure.	NA
value_d	Value Code - The code indicating the historic value of the structure.	HIGH, HIGHEST, MEDIUM
stru_size	Floor Area - The total floor area of the interior space in the historic structure.	NA
prop_size	Property Grounds Size Area - The total area of any grounds surrounding the historic structure.	NA
prop_u_d	Property Unit Measure Code - Unit of measure for the property surrounding the historic site.	SQUARE FOOT, SQUARE INCH, SQUARE MILE
stt_use_d	Usage Status Code - The usage status of the structure.	RUINS, STANDING
str_desc	Condition Descriptive - Text Description of the condition of the structure.	NA
signif_d	Significance Code - Brief description of the historic significance of the structure.	ART, COMMERCE, ECONOMICS
imp_pri_d	Prior to Discovery Impact Code - The factor that caused the greatest impact to the site prior to discovery.	COMBINED, HISTORICAL, INTACT
imp_fut_d	Future Impact Code - The primary continuing or potential factor that threatens the future integrity of the site.	COMBINED, HISTORICAL, INTACT
mgmt_recom	Mgt Recommendation Descriptive Text - The management recommendation for maintaining and preserving the historic structure.	NA
nreg_cri_d	National Register Criteria Code - The criteria used to nominate the site for National Register of Historic Places status.	A, B, C
nreg_con_d	National Register Consideration Code - Other issues to consider for placement on the National Register of Historic Places.	BIRTHPLACE, GRAVE, RELIGION
nreg_rat_d	National Register Rating Code - National Register of Historic Places rating for the historic value of the site.	HIGH, HIGHEST, MEDIUM

crhststr:	(Cultural, Historic, Structure) – Attribute Definitions <i>(PK) - The primary key of an entity table uniquely identifies each record in the table.</i> <i>(FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.</i>	Domain Examples (Range or Values)
nreg_stt_d	National Register Status Code - Status of placement of site on the National Register of Historic Places.	LISTED, ELIGIBLE, UNKNOWN
stru_u_d	Unit Measure Code - Unit of measure for the interior space in the structure.	SQUARE FOOT, SQUARE INCH, SQUARE MILE
levels	Number of Levels Quantity, the number of stories in the structure, including those below ground level.	NA
municip_id	(FK) JOIN to cmgenmun (Common General, Municipality) Used to link the record to a municipality.	NA
dstrict_id	(FK) JOIN to crhstdst (Cultural Historic, Historic District Attribute table) Used to link the record to the cultural historic district.	NA
area_size	Area, the size of the area, zone, or polygon in square units.	NA
area_u_d	Area Size Unit Measure Code, the unit of measure for area.	SQUARE FOOT, SQUARE INCH, SQUARE MILE
perim	Perimeter Dimension, the distance around the boundary of the area, zone, or subject item in linear units.	NA
perim_u_d	Perimeter Unit Measure Code The unit of measure for length	M=Meter, IN=Inch, FT=Feet
instln_id	(FK) JOIN to cddodins (Cadastre Federal DoD, DoD Property Attribute table) Used to link the record to the applicable INSTALLATION record.	NA
buildng_id	(FK) JOIN to bggenstr (Buildings General, Buildings Structure Attribute table) Used to link the record to an associated facility (building, structure).	NA
project_id	(FK) JOIN to cmgenprj (Common General, Project Attribute table) Used to link the record to the appropriate project or contract under which the item was studied, collected, installed, purchased, or managed.	NA
user_flag	User Flag Text An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.	NA
facil_id	(FK) JOIN to cmgenfac (Common General, Facility Attribute table)Used to link the record to the Facility Record.	NA

crhststr:	(Cultural, Historic, Structure) – Attribute Definitions <i>(PK) - The primary key of an entity table uniquely identifies each record in the table.</i> <i>(FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.</i>	Domain Examples (Range or Values)
grid_value	Graphic Attribute Raster GValue A numeric identification of a raster element in an image or grid that represents the feature.	NA
coord_x	X Coordinate The x component of individual coordinate point.	NA
coord_y	Y Coordinate The y component of individual coordinate point.	NA
coord_z	Z Coordinate The z component of individual coordinate point.	NA
nreg_no	National Historical Registry Number Identifier The number used as a reference for the National Historical Registry.	NA
sur_crs_id	(FK) - Links the record to HYSURCRS through primary key SUR_CRS_ID.	NA
up_riv_mil	The relative mile marker at the up river end of the historic structure.	NA
dn_riv_mil	The relative mile marker at the down river end of the historic structure	NA
agency-id	(FK) - Links the record to CMGENAGC through key AGENCY_ID.	NA
owner-id	(FK) - Links the record to CMGENOWN through primary key OWNER_ID.	NA
setting	A brief description of the environmental setting of the structure.	NA
str_name	Name of the historic structure.	NA
feat_typ_d	Code for the type of cultural resource feature	MONUMENT, MARKERS, LANDMARKS
start_cen	The century portion of the conventional date when the structure was first built. (for 1836=1800)	NA
start_dec	The decade portion of the conventional date when the structure was first built. (for 1836=30)	NA
start_yr	The year portion of the conventional date when the structure was first built. (for 1836=6)	NA
end_cen	The century portion of the conventional date when the structure was last used. (for 1836=1800)	NA
end_dec	The decade portion of the conventional date when the structure was last used. (for 1836=30)	NA
end_yr	The year portion of the conventional date when the structure was last used. (for 1836=6)	NA
address_id	(FK) - Links the record to CMGENADD through primary key ADDRESS_ID.	NA
location	A description of the location if no address is available.	NA

crhststr:	(Cultural, Historic, Structure) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
survey_id	(FK) - Links the record to GDSRIPRJ through primary key SURVEY_ID	NA
rec_rep_d	The type of agency serving as the repository of the records for the investigation of the structure.	FEDERAL, SHPO, STATE
loc_rel_d	An indication of the reliability of the artifact's recorded location.	GOOD, NONE, POOR
poc_id	(FK) - Links the record to CMGENPOC through primary key POC_ID	NA
delisted	The date a listing was deleted from the NRHP. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915)	NA
narrative	A description or other unique information concerning the subject item, limited to 240 characters.	NA

Table 24. Cultural resource child table CRGENREF – cultural resources, general, reference documentation.

Definition: This table contains data about the cited information or documentation of historically significant sites.

crngenref:	(Cultural Resources, General, Reference Documentation) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
refer_id	(PK) Identifier A unique, user defined identifier for each record or instance of an entity.	NA
meta_id	(FK) JOIN to cmgenmet Used to link the record to the applicable feature level metadata record(s).	NA
date_acqrd	Acquired Date The date the reference was acquired. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).	NA
date_pub	Published Date The date the reference was published or released. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).	NA
title	Title Name The title of the reference.	NA
ref_typ_d	Reference Type Code The type of reference. (journal, map, oral history).	LETTER, MAP, JOURNAL
source	Source Descriptive Text The source of the reference such as the name of the journal in which the reference was printed.	NA
auth_name	Author(s) Name Name of the author(s) of the reference.	NA

crgenref:	(Cultural Resources, General, Reference Documentation) – Attribute Definitions <i>(PK) - The primary key of an entity table uniquely identifies each record in the table.</i> <i>(FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.</i>	Domain Examples <i>(Range or Values)</i>
narrative	Narrative Text A description or other unique information concerning the subject item, limited to 240 characters.	NA
crm_sty_id	(FK) JOIN to crmgtsty Used to link the record with the applicable study area.	NA
hst_chr_id	(FK) JOIN to crgenhst Used to link the record to the appropriate historic record.	NA
crm_str_id	(FK) JOIN to crgenchr Used to link the record to the Entity record.	NA
user_flag	User Flag Text An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.	NA
restrict_d	Restriction Constituted Boolean Value Code A Boolean indicating whether or not the document or reference constitutes a restriction.	YES, NO
facil_id	(FK) JOIN to cmgenfac Used to link the record to the Facility Record.	NA
instln_id	(FK) JOIN to cddodins Used to link the record to the applicable INSTALLATION record.	NA
media_id	(FK) JOIN to cmmedmed Used to link the record to associated multimedia records that reference data such as imagery, video, audio, scanned documents, drawings, and other digital media.	NA
federal_d	Federal Boolean Code A Boolean indicating whether the data is located at a federal agency.	YES, NO
local_d	Local Boolean Code A Boolean indicating whether the data is located at a local government agency.	YES, NO
univ_d	University Boolean Code A Boolean indicating whether the data is located at a university.	YES, NO
state_d	State Boolean Code A Boolean indicating whether the data is located at a state agency.	YES, NO
site_id	(FK) JOIN to crarcsit - Links the record to CRARCSIT through (PK)SITE_ID.	NA
dstrict_id	(FK) JOIN to crhstdst - Links the record to CRHSTDST through (PK)DSTRCT_ID.	NA

Table 25. Cultural resource child table CRMGTTRES – cultural resources, management, restriction.**Definition -** This table contains data about areas where activity is restricted due to their historic or cultural significance.

crmgttres	(Cultural Resources, Management, Restriction) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
res_are_id	(PK) Identifier A unique, user defined identifier for each record or instance of an entity.	NA
datalink	Unique Data Identifier Graphic Key. This attribute normally contains a linking key to an external graphic element. In some systems, this key is managed and populated by the GIS. Care should be taken in modifying this field manually. This is NOT the table's (PK).	NA
map_id	(FK) JOIN to cmgenmap Used to link the record to the appropriate map.	NA
meta_id	(FK) JOIN to cmgenmet Used to link the record to the applicable feature level metadata record(s).	NA
media_id	(FK) JOIN to cmmedmed Used to link the record to associated multimedia records that reference data such as imagery, video, audio, scanned documents, drawings, and other digital media.	NA
coord_id	(FK) JOIN to cmgencrd Used to link the record to the appropriate point coordinate record(s).	NA
date_start	Start Date The date the restriction was or will be established. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).	NA
date_ended	End Date The date the restriction was or will be lifted. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).	NA
area_name	Area Name Name of the cultural resource area.	NA
area_stt_d	Area Status Code Status of the cultural resource area.	COLLECTION. EXCAVATED, TESTED
reason	Reason Descriptive Text The reason for the restriction	NA
area_size	Area The size of the area, zone, or polygon in square units	NA
area_u_d	Area Size Unit Measure Code The unit of measure for area.	SQUARE FOOT, SQUARE INCH, SQUARE MILE

crmgtres	(Cultural Resources, Management, Restriction) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
perim	Perimeter Dimension The distance around the boundary of the area, zone, or subject item in linear units.	NA
perim_u_d	Perimeter Unit Measure Code The unit of measure for length	M=Meter, IN=Inch, FT=Feet
poc_id	(FK) JOIN to cmgenpoc Used to link the record with a point of contact.	NA
user_flag	User Flag Text An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.	NA
instln_id	(FK) JOIN to cddodins Used to link the record to the applicable INSTALLATION record.	NA
facil_id	(FK) JOIN to cmgenfac Used to link the record to the Facility Record.	NA
coord_x	X Coordinate The x component of individual coordinate point.	NA
coord_y	Y Coordinate The y component of individual coordinate point.	NA
coord_z	Z Coordinate The z component of individual coordinate point.	NA
dstrict_id	(FK) JOIN to crhstdst Links the record to CRHSTDST through primary key DSTRIC_ID.	NA

Table Name: **gdsriprj** – This table contains information about geodetic survey projects and sub-projects.

Join Relationships: **Cultural Resource Child Tables to Parent (gdsriprj)**

In addition to a project being described by all the data attributes in the project table (gdsriprj), a geodetic project is further described by all data attributes in its associated child tables.

crarcsit – This table contains data about archeological sites (not included – related to archeology)

crhstdst – This table contains information about historic districts

crhststr — This table contains information about historic structures

crmgtsrv – This table contains data about sites where detailed investigations have been conducted for cultural resources (not included – related to archeology)

All Parent Tables to Child gdsripri

The data contained in child tables can be directly queried by associated parent tables.

cddoins – This table contains data about Department of Defense Installations.

cmgencon – This table contains contractor information.

cmgenctr – This table contains information about a contract.

cmgenfac – Real property, having a specified use, that is built or maintained by people.

cmgenmet – This table contains attribute table level metadata, data about the attribute data which identifies items like who collected the data, when it was collected, and the accuracy of the data.

cmgenpri – This table contains information about projects.

cmmedmed – This table contains information about any external image, graphic, cad file, or other representation of the feature.

hysurcrs – This table contains data about surface water courses.

imfdcgag – This table contains data about water gaging stations.

Table 26. Parent table GDSRIPRJ – geodetic survey projects.

gdsriprij:	(Geodetic Survey, Survey Projects) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
survey_id	(PK) Identifier. Any name or number used to uniquely identify the survey or project or subproject (contract no. or project name).	NA
contr_id	(FK). The Contractor or Government office which performed the control survey.	NA
project_mn	A name or number relating to the assigned office project manager.	NA
field_wkr	The name (s) of the instrument worker (s) on the survey field party.	NA
lead_wrk	The name of the field party chief(s) for the survey.	NA
narrative	A description or other unique information concerning the subject item, limited to 240 characters.	NA
coord_u_d	The unit of measure for the state plane x and y coordinates in the monument table for this project.	DEG (degrees), MIN (minutes), SEC (seconds)
utm_u_d	The unit of measure for the UTM Northing and Easting coordinate stored in the monument table for this project.	10, 11, 14
utm_zone	The UTM coordinate system zone for this project.	NA
projectn_d	The method used to transform three-dimensional space onto a two-dimensional map.	AZIMUTHAL, EQUIDISANT, EQUIDISTANT 1.400 EQUIRECTANG
gridcoor_d	The plane-rectangular grid coordinate system used on this project.	SPCS_1983, UPS Universal Polar Stereographic, UTM Universal Trans- verse Mercator
epoch	Survey epoch used to establish the control point.	NA

gdsriprj:	(Geodetic Survey, Survey Projects) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
horz_dat_d	The horizontal datum for the horizontal coordinates established for the monuments on this project.	HARN, High Accuracy Reference Network 2.100 NAD_27, North American Datum of 1927 1.600 NAD_83, North American Datum of 1983
vert_dat_d	The vertical datum for the elevation established on the monuments on this project.	ALWP, Average Low Water Plane ALWP 1.800 LWRP, Low Water Reference Plane 1974 1.800 MHW, Mean High Water
geoid_u_d	The unit of measure for the geoid.	METERS
rod_u_d	The unit of measure for the rod length.	FEET
elev_u_d	The unit of measure for the original elevation.	METERS, FEET
adjele_u_d	The unit of measure of the adjusted elevation.	METERS, FEET
project_id	(FK). Used to link the record to the appropriate project or contract under which the item was studied, collected, installed, purchased, or managed.	NA
user_flag	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.	NA
sur_crs_id	(FK) - A unique, user defined identifier for each record or instance of an entity.	NA
date_start	The date the project actually started. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915)	NA
date_end	The date the project was actually completed. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915)	NA

gdsriprj:	(Geodetic Survey, Survey Projects) – Attribute Definitions <i>(PK) - The primary key of an entity table uniquely identifies each record in the table.</i> <i>(FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.</i>	Domain Examples <i>(Range or Values)</i>
up_riv_mil	The relative mile marker at the up river end of the topography.	NA
dn_riv_mil	The relative mile marker at the down river end of the topography.	NA
up_range	The hydrographic survey ranges that bound the reach that was surveyed.	NA
dn_range	The hydrographic survey ranges that bound the reach that was surveyed.	NA
surv_typ_d	Type or purpose of the survey.	INITIAL, POST, PRE
surf_elev	Water surface elevation at the time of the survey in feet NGVD.	NA
xyz_file	The complete file name, including the full path, for the ASCII text file containing the final XYZ data for the survey. The user will be able to retrieve this file for input to Terrain Modeler, InRoads, or Microstation.	NA
gage_id	(FK) - Links the record to IMFDCGAG through primary key GAGE_ID.	NA
topo_surv	The bounding area or footprint that defines where a topographic survey was taken.	NA
dem_file	The completed filename, including path, for the digital elevation model file.	NA
dem_typ_d	The type if digital elevation model (.tin, .grd, .dgn). The file should contain the vector elevation contours, spot elevations (xyz data), base map planimetric features, and neat lines and title blocks.	.DGN,.DTM,.TIN,.TTN
ODBCrec_no	Operational database connectivity record number.	NA
contract_id	(FK). Used to link the record to the applicable CONTRACT record the work order is issued under.	NA
meta_id	(FK). Used to link the record to the applicable feature level metadata record(s).	NA
facil_id	(FK). Used to link the record to the Facility Record.	NA
instln_id	(FK). Used to link the record to the applicable INSTALLATION record.	NA
media_id	(FK). Used to link the record to associated multimedia records that reference data such as imagery, video, audio, scanned documents, drawings, and other digital media.	NA

Table 27. Cultural resource child table CRHSTDST – cultural resources, historic district.

Definition: This table contains data about historic districts.

crhstdst:	(Cultural Resources, Historic, District) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
district_id	(PK) Identifier A unique, user defined identifier for each record or instance of an entity.	NA
datalink	Unique Data Identifier Graphic Key. This attribute normally contains a linking key to an external graphic element. In some systems, this key is managed and populated by the GIS. Care should be taken in modifying this field manually. This is NOT the table's (PK).	NA
map_id	(FK) JOIN to cmgenmap (Common General, Analog and Digital Maps Attribute table) Used to link the record to the appropriate map.	NA
meta_id	(FK) JOIN to cmgenmet (Common General, Metadata Attribute table) Used to link the record to the applicable feature level metadata record(s).	NA
media_id	(FK) JOIN to cmmedmed (Common Media, Common Media Attribute table) Used to link the record to associated multimedia records that reference data such as imagery, video, audio, scanned documents, drawings, and other digital media.	NA
coord_id	(FK) JOIN to cmgenrcrd (Common General, Positional Location Attribute table). Used to link the record to the appropriate point coordinate record(s).	NA
arch_sty_d	Architectural Style Code The code which indicates the architectural style of the district.	BUNGALOW, CLASSIC, CHICAGO
cond_desc	Condition Description Name Description of the condition of the district.	NA
cond_dst_d	Condition Code Code that indicates the condition of the district.	CONDEMNED, DAMAGED
dist_desc	Description Name Brief description of the historic significance of the district.	NA
dist_design	Designation Identifier This designation is assigned by the agency with jurisdiction over the district. The agency is specified in the poc_num attribute.	NA
value_d	Value Code The code indicating the historic value of the district.	HIGH, HIGHEST, MEDIUM
signif_d	Significance Code The cultural area or field where this district is most significant.	ART, COMMERCE, ECONOMICS
imp_pri_d	Prior to Discovery Impact Code The factor that caused the greatest impact to the site prior to discovery.	COMBINED, HISTORICAL, INTACT

crhstdst:	(Cultural Resources, Historic, District) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
imp_fut_d	Future Impact Code The primary continuing or potential factor that threatens the future integrity of the site.	COMBINED, HISTORICAL, INTACT
dist_name	District Name. Name of the historic district.	NA
nreg_cri_d	National Register Criteria Code The criteria used to nominate the district for National Register of Historic Places status.	A, B, C,
nreg_con_d	National Register Consideration Code Other issues to consider for placement on the National Register of Historic Places.	BIRTHPLACE, GRAVE, RELIGION
nreg_rat_d	National Register Rating Code National Register of Historic Places rating for the historic value of the district.	HIGH, HIGHEST, MEDIUM
nreg_stt_d	National Register Status Code Status of placement of the district on the National Register of Historic Places.	LISTED, ELIGIBLE, UNKNOWN
municip_id	(FK) JOIN to cmgenmun (Common General, Municipality Attribute table) Used to link the record to a particular jurisdiction.	NA
poc_id	(FK) JOIN to cmgenpoc (Common General, Point of Contact Attribute table) Used to link the district with a point of contact.	NA
area_size	Area. The size of the area, zone, or polygon in square units.	NA
area_u_d	Area Size Unit Measure Code. The unit of measure for area	SQUARE FOOT, SQUARE INCH, SQUARE MILE
perim	Perimeter Dimension The distance around the boundary of the area, zone, or subject item in linear units.	NA
perim_u_d	Perimeter Unit Measure Code The unit of measure for length	M=Meter, IN=Inch, FT=Feet
instln_id	(FK) JOIN to cddodins (Cadastre Federal DoD, DoD installations Attribute Table) Used to link the record to the applicable INSTALLATION record.	NA
project_id	(FK) JOIN to cmgenprj (Common General, Project Attribute table) Used to link the record to the appropriate project or contract under which the item was studied, collected, installed, purchased, or managed.	NA

crhstdst:	(Cultural Resources, Historic, District) – Attribute Definitions <i>(PK) - The primary key of an entity table uniquely identifies each record in the table.</i> <i>(FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.</i>	Domain Examples <i>(Range or Values)</i>
user_flag	User Flag Text An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.	NA
facil_id	(FK) JOIN to cmgenfac (Common General, Facility Attribute table)Used to link the record to the Facility Record.	NA
grid_value	Graphic Attribute Raster GValue A numeric identification of a raster element in an image or grid that represents the feature.	NA
coord_x	X Coordinate The x component of individual coordinate point.	NA
coord_y	Y Coordinate The y component of individual coordinate point.	NA
coord_z	Z Coordinate The z component of individual coordinate point.	NA
nreg_no	National Historical Registry Number Identifier The number used as a reference for the National Historical Registry.	NA
sur_crs_id	(FK) - Links the record to HYSURCRS through primary key SUR_CRS_ID.	NA
up_riv_mil	The relative river mile mark at the upper end of the district area.	NA
dn_riv_mil	The relative river mile mark at the lower end of the district area.	NA
setting	A brief description of the environmental setting of the district area.	NA
affil_d	The cultural prehistoric or historic period with which the artifact is affiliated.	ADENA, CADDO_1, BAYTOWN
start_cen	The century portion of the conventional date when the district was first established. (for 1836=1800)	NA
start_dec	The decade portion of the conventional date when the district was first established. (for 1836=30)	NA
start_yr	The year portion of the conventional date when the district was first established. (for 1836=6)	NA
end_cen	The century portion of the conventional date when the was last used. (for 1836-1800)	NA
end_dec	The decade portion of the conventional date when the district was last used. (for 1836=30)	NA
end_yr	The year portion of the conventional date when the district was last used. (for 1836=6)	NA

crhstdst:	(Cultural Resources, Historic, District) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
disturb_d	The code representing the level of disturbance of the district.	DESTROYED, MAJORIMPACT, NONE
survey_id	(FK) - Links the record to GDSRIPRJ through primary key SURVEY_ID.	NA
rec_rep_d	The type of agency serving as the repository of the records for the investigation of the district.	FEDERAL, SHPO, STATE
loc_rel_d	An indication of the reliability of the artifact's recorded location.	GOOD, NONE, POOR
delisted	The date a listing was deleted from the NRHP. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).	NA
narrative	A description or other unique information concerning the subject item, limited to 240 characters.	NA

Table 28. Cultural resource child table CRHSTSTR – cultural resources, historic structure.

Definition: This table contains data about historically significant structures.

crhststr:	(Cultural, Historic, Structure) – Attribute Definitions (PK) - The primary key of an entity table uniquely identifies each record in the table. (FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.	Domain Examples (Range or Values)
hstbld_id	(PK) Primary Key A unique operator generated alphanumeric identifier assigned to a facility within an installation for identification throughout its life cycle. Historic Building ID.	NA
datalink	Unique Data Identifier Graphic Key. Graphic Key. This attribute normally contains a linking key to an external graphic element. In some systems, this key is managed and populated by the GIS. Care should be taken in modifying this field manually. This is NOT the table's (PK).	NA
map_id	(FK) JOIN to cmgenmap (Common General, Analog and Digital Maps Attribute table) Used to link the record to the appropriate map.	NA
meta_id	(FK) JOIN to cmgenmet (Common General, Metadata Attribute table) Used to link the record to the applicable feature level metadata record(s)	NA

crhststr:	(Cultural, Historic, Structure) – Attribute Definitions <i>(PK) - The primary key of an entity table uniquely identifies each record in the table.</i> <i>(FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.</i>	Domain Examples <i>(Range or Values)</i>
media_id	(FK) JOIN to cmmedmed (Common Media, Common Media Attribute table) Used to link the record to associated multimedia records that reference data such as imagery, video, audio, scanned documents, drawings, and other digital media	NA
coord_id	(FK) JOIN to cmgenrcd (Common General, Positional Location Attribute table). Used to link the record to the appropriate point coordinate record(s).	NA
str_stt_d	Status Code Discriminator. A descriptor for the status of the structure.	LEGEND, RUINS, STANDING
prop_stt_d	Property Usage Status Code - The usage status of the structure.	USABLE, UNKNOWN
rooms	Room Quantity - The number of rooms in the historic structure.	NA
affil_d	Affiliated Artifact Time Code - The cultural prehistoric or historic period with which the artifact is affiliated.	ADENA, CADD0_1, BAYTOWN
arch_sty_d	Architectural Style Code - The code indicating the architectural style of the structure.	BUNGALOW, CLASSIC, CHICAGO
architect	Architect Name - The name of the person or firm that was the architect for the structure.	NA
use_str_d	Use Code - The current use of the structure.	ARMORY, CAPITOL, CLUBHOUSE
disturb_d	Disturbance Level Code - The level of disturbance to the historic structure.	DESTROYED, MAJORIMPACT, NONE
str_design	Designation Name - Primary structure designation. This designation is assigned by the agency with jurisdiction over the structure. The agency is specified in the poc_agency attribute.	NA
habs_num	Historic American Building Survey Number Code - The Historic American Buildings Survey number for the structure.	NA
haer_num	Historic American Engineering Record Number Code - The Historic American Engineering Record number for the structure.	NA
value_d	Value Code - The code indicating the historic value of the structure.	HIGH, HIGHEST, MEDIUM
stru_size	Floor Area - The total floor area of the interior space in the historic structure.	NA
prop_size	Property Grounds Size Area - The total area of any grounds surrounding the historic structure.	NA
prop_u_d	Property Unit Measure Code - Unit of measure for the property surrounding the historic site.	SQUARE FOOT, SQUARE INCH, SQUARE MILE
stt_use_d	Usage Status Code - The usage status of the structure.	RUINS, STANDING

crhststr:	(Cultural, Historic, Structure) – Attribute Definitions <i>(PK) - The primary key of an entity table uniquely identifies each record in the table.</i> <i>(FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.</i>	Domain Examples <i>(Range or Values)</i>
str_desc	Condition Descriptive - Text Description of the condition of the structure.	NA
signif_d	Significance Code - Brief description of the historic significance of the structure.	ART, COMMERCE, ECONOMICS
imp_pri_d	Prior to Discovery Impact Code - The factor that caused the greatest impact to the site prior to discovery.	COMBINED, HISTORICAL, INTACT
imp_fut_d	Future Impact Code - The primary continuing or potential factor that threatens the future integrity of the site.	COMBINED, HISTORICAL, INTACT
mgmt_recom	Mgt Recommendation Descriptive Text - The management recommendation for maintaining and preserving the historic structure.	NA
nreg_cri_d	National Register Criteria Code - The criteria used to nominate the site for National Register of Historic Places status.	A, B, C,
nreg_con_d	National Register Consideration Code - Other issues to consider for placement on the National Register of Historic Places.	BIRTHPLACE, GRAVE, RELIGION
nreg_rat_d	National Register Rating Code - National Register of Historic Places rating for the historic value of the site.	HIGH, HIGHEST, MEDIUM
nreg_stt_d	National Register Status Code - Status of placement of site on the National Register of Historic Places.	LISTED, ELIGIBLE, UNKNOWN
stru_u_d	Unit Measure Code - Unit of measure for the interior space in the structure.	SQUARE FOOT, SQUARE INCH, SQUARE MILE
levels	Number of Levels Quantity, the number of stories in the structure, including those below ground level.	NA
municip_id	(FK) JOIN to cmgenmun (Common General, Municipality) Used to link the record to a municipality.	NA
dstrict_id	(FK) JOIN to crhstdst (Cultural Historic, Historic District Attribute table) Used to link the record to the cultural historic district.	NA
area_size	Area, the size of the area, zone, or polygon in square units.	NA
area_u_d	Area Size Unit Measure Code, the unit of measure for area.	SQUARE FOOT, SQUARE INCH, SQUARE MILE
perim	Perimeter Dimension, the distance around the boundary of the area, zone, or subject item in linear units.	NA

crhststr:	(Cultural, Historic, Structure) – Attribute Definitions <i>(PK) - The primary key of an entity table uniquely identifies each record in the table.</i> <i>(FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.</i>	Domain Examples <i>(Range or Values)</i>
perim_u_d	Perimeter Unit Measure Code The unit of measure for length	M=Meter, IN=Inch, FT=Feet
instln_id	(FK) JOIN to cddodins (Cadastre Federal DoD, DoD Property Attribute table) Used to link the record to the applicable INSTALLATION record.	NA
building_id	(FK) JOIN to bggenstr (Buildings General, Buildings Structure Attribute table) Used to link the record to an associated facility (building, structure).	NA
project_id	(FK) JOIN to cmgenprj (Common General, Project Attribute table) Used to link the record to the appropriate project or contract under which the item was studied, collected, installed, purchased, or managed.	NA
user_flag	User Flag Text An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.	NA
facil_id	(FK) JOIN to cmgenfac (Common General, Facility Attribute table)Used to link the record to the Facility Record.	NA
grid_value	Graphic Attribute Raster GValue A numeric identification of a raster element in an image or grid that represents the feature.	NA
coord_x	X Coordinate The x component of individual coordinate point.	NA
coord_y	Y Coordinate The y component of individual coordinate point.	NA
coord_z	Z Coordinate The z component of individual coordinate point.	NA
nreg_no	National Historical Registry Number Identifier The number used as a reference for the National Historical Registry.	NA
sur_crs_id	(FK) - Links the record to HYSURCRS through primary key SUR_CRS_ID.	NA
up_riv_mil	The relative mile marker at the up river end of the historic structure.	NA
dn_riv_mil	The relative mile marker at the down river end of the historic structure	NA
agency-id	(FK) - Links the record to CMGENAGC through key AGENCY_ID.	NA
owner-id	(FK) - Links the record to CMGENOWN through primary key OWNER_ID.	NA
setting	A brief description of the environmental setting of the structure.	NA

crhststr:	(Cultural, Historic, Structure) – Attribute Definitions <i>(PK) - The primary key of an entity table uniquely identifies each record in the table.</i> <i>(FK) - A foreign key is a field in a relational table that matches the primary key column of another entity table. The foreign key is used to cross-reference the tables.</i>	Domain Examples <i>(Range or Values)</i>
str_name	Name of the historic structure.	NA
feat_typ_d	Code for the type of cultural resource feature	MONUMENT, MARKERS, LANDMARKS
start_cen	The century portion of the conventional date when the structure was first built. (for 1836=1800)	NA
start_dec	The decade portion of the conventional date when the structure was first built. (for 1836=30)	NA
start_yr	The year portion of the conventional date when the structure was first built. (for 1836=6)	NA
end_cen	The century portion of the conventional date when the structure was last used. (for 1836=1800)	NA
end_dec	The decade portion of the conventional date when the structure was last used. (for 1836=30)	NA
end_yr	The year portion of the conventional date when the structure was last used. (for 1836=6)	NA
address_id	(FK) - Links the record to CMGENADD through primary key ADDRESS_ID.	NA
location	A description of the location if no address is available.	NA
survey_id	(FK) - Links the record to GDSRIPRJ through primary key SURVEY_ID	NA
rec_rep_d	The type of agency serving as the repository of the records for the investigation of the structure.	FEDERAL, SHPO, STATE
loc_rel_d	An indication of the reliability of the artifact's recorded location.	GOOD, NONE, POOR
poc_id	(FK) - Links the record to CMGENPOC through primary key POC_ID	NA
delisted	The date a listing was deleted from the NRHP. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915)	NA
narrative	A description or other unique information concerning the subject item, limited to 240 characters.	NA

5 Summary

By the conclusion of this Phase I investigation, the following tasks were completed:

- The principal Federal mandates governing the preservation of historically and culturally significant facilities were identified and interpreted in terms of implications for the SDSFIE/FMSFIE geospatial data model.
- Other Federal mandates affecting the stewardship of and accountability for U.S. heritage resources were identified and interpreted in terms of relevance to geospatial data requirements.
- Existing Federal data models and resources were evaluated in order to determine whether they may be leveraged for purposes of developing a definitive geospatial data model for historically and culturally significant facilities.
- The SDSFIE/FMSFIE 2.2 data specification was reviewed for the purpose of identifying existing data types that may be used in their current form to satisfy the various Federal documentation, tracking, and accountability mandates.

The results of these studies are summarized in the form of two matrices (see Appendices A and B). Both matrices include the same sets of proposed data types. The Appendix A matrix shows which Federal mandates may be partially addressed by inclusion of each data type. The Appendix B matrix shows which existing Federal database systems or specifications include a data type similar to the ones proposed.

During these studies the authors became acquainted with a number of additional references and resources that should be useful to consider during the Phase II research. The following tasks are recommended for the beginning of Phase II:

1. Review the following additional mandates and guidance that came to light during the Phase I investigation, specifically:
 - the 1995 Marsh Panel report on DoD Total Quality of Life
 - Senate Report 104-287
 - House Report 106-614
 - facility-related aspects of the *Report to Congress on Federal Archeological Activities*

2. Review the following data standards and management systems that came to light during the Phase I investigation, specifically:
 - legacy information on existing SDSFIE Cultural Standards that were based on Edwards Air Force Base (AFB), CA, and Fort Bragg, NC GIS database schemas (including Edwards AFB compliance documentation containing data organizations and definitions)
 - Federal Geospatial Data Standards (FGDC); meta data standards for western states
 - NPS Integrated Preservation Software (IPS)
 - the Eglin AFB cultural resources management system.
3. Enhance the proposed Phase I data types by:
 - reviewing the *LCS Technical Guidance Manual* for possible pick list values (e.g., building/structure condition)
 - finding sources and developing a master list of DoD primary site functions (e.g., weapons range, depot storage, shipyard, etc.)
 - developing a master list of DoD areas of significance (expanding on existing NRIS pick list values for Federal facilities)
 - expanding the historic features data element.

Also, it would be useful to evaluate existing industry standards for construction specification as an additional possible resource for enhancing the definitive geospatial data model for historic buildings and structures. Specifically, the researchers should examine MASTERSPEC, developed by the American Institute of Architects*. MASTERSPEC divisions, facility components within those division, and warranty aspects of those components may encompass data types that could significantly enhance the efficacy of the definitive geospatial data model. Major MASTERSPEC divisions include the following:

1. General
2. Site Construction
3. Concrete
4. Masonry
5. Metals
6. Wood/Plastics
7. Thermal/Moisture Protection

* View the complete MASTERSPEC table at <http://www.masterspec.com/visitor/masterspec/ms.html>.

8. Doors/Windows
9. Finishes
10. Specialties
11. Equipment
12. Furnishings
13. Special Construction
14. Conveying Systems
15. Mechanical
16. Electrical.

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Abbreviations and Acronyms

ACC = Air Combat Command

ACES-RP = Automated Civil Engineering System–Real Property

ACHP = Advisory Council on Historic Preservation

ACSIM = Army Chief of Staff for Installation Management

AF = Air Force

CADD = Computer-Aided Design and Drafting

CATCODE = Category Code

CCD = Cost Category Directory

CERL = Construction Engineering Research Laboratory

CFO = Chief Financial Officer

COE = Corps of Engineers

DA = Department of the Army

DBMS = Database Management System

DESCIM = Defense Environmental Security Corporate Information Management

DLA = Defense Logistics Agency

DoD = Department of Defense

DoDI = Department of Defense Instruction

DON = Department of the Navy

DPW = Directorate of Public Works

ER = Entity Relationship

ERDC = Engineer Research and Development Center

ESRI = Environmental Systems Research Institute

FGDC = Federal Geographic Data Committee

FK = Foreign Key

FMSFIE = Facility Management Standard for Facilities, Infrastructure, and Environment

FPO = Federal Preservation Officer

FWG = Field Working Group

FY = Fiscal Year

GAO = Government Accounting Office

GIS = Geographic Information System

GUID = Globally Unique Identifier

GVALUE = Grid Value

HA = Heritage Asset

HABS = Historic American Buildings Survey

HAER = Historic American Engineering Record

HARP = Historic Resources Protection Plan

HQACC = Headquarters Air Combat Command

HSA = Historic Sites Act

ICRMP = Integrated Cultural Resource Management Plan

IFS = Integrated Facilities System

iNFADS = Internet Navy Facility Assets Data Store

ISR = Installation Status Report

Latlong = Latitude-Longitude

LCS = List of Classified Structures

MACOM = Major Command

MAGIC = Master Activity General Information Control

MAJCOM = Major Command

MWR/NAF = Morale Welfare & Recreation/Non-Appropriated Funds

NASA = National Aeronautics and Space Administration

NFA = Navy Facility Assets

NFADB = Naval Facilities Asset Database

NHL = National Historic Landmark

NHPA = National Historic Preservation Act

NPS = National Park Service

NR = National Register

NRHP = National Register of Historic Places

NRIS = National Register Information System

OMB = Office of Management and Budget

O&M = Operations & Maintenance

OM&R = Operations, Maintenance & Repair

OSD = Office of the Secretary of Defense

PDF = Portable Document Format

PK = Primary Key

PLSS = Public Land Survey System

PRV = Plant Replacement Value

ROI = Return on Investment

RPI = Real Property Inventory

RSSI = Required Supplementary Stewardship Information

SDSFIE = Spatial Data Standard for Facilities, Infrastructure, and Environment

SHPO = State Historic Preservation Officer

SIOH = Supervision, Inspection, and Overhead

SOI = Secretary of the Interior

STAMIS = Standard Army Management Information System

TSSDS = Tri-Service Spatial Data Standards

UIC = Unit Identification Code

U.S. = United States

USACE = Army Corps of Engineers

USD = United States Dollars

UTM = Universal Transverse Mercator

WGS84 = World Geodetic System 1984

Appendix A: Data Requirement Matrix for Historic Facility Tracking

Data Types Recommended for the SDSFIE/FDSFIE Historic Facility Data Model

Data	Data Description	Data Type	Preservation (HSA; NHPA)	Systems (NRIS; LCS)	Real Property & Cultural	Financial mandates (CFO; etc)
OWNERSHIP/USER TABLE						
Reporting DoD Component	Service responsible for real property accountability	Alphanumeric	--	--	DoDI 4165.14	--
Major Command/Claimant	Major command/claimant to which installation is assigned	Alphanumeric	--	--	DoDI 4165.14	--
Installation/Base/Activity	Identifies installation with real property inventory reporting control over building/structure	Alphanumeric	--	--	DoDI 4165.14	--
Government Interest	Defines government's legal or financial stake, right, or title to building/structure (e.g. owned or leased)	Alphanumeric	--	LCS--Legal Interest	DoDI 4165.14	--
Owning Agency	Describes actual owner of building/structure (e.g. AF, City of San Antonio, NASA, etc.)	Alphanumeric	--	NRIS; LCS--Federal Government & Local Government Owner	--	--
Occupant	Identifies user(s) of building/structure (include organization to which lease has been granted)	Character	--	--	DoDI 4165.14 (use for leases as well)	--
BUILDING/STRUCTURE TABLE						
Resource Type	Describes type of resource (e.g. building or structure)	Alphanumeric	--	NRIS; LCS--Structure Type	--	--
Current Building/Structure No.	Unique number that denotes specific building/structure	Numeric	--	NRIS-- Ref. No.; LCS--Structure Number	DoDI 4165.14 (use for capital improvements & leases as well)	--
Original Building/Structure No.	Original unique number that denotes specific building/structure	Numeric	--	--	--	--

Data	Data Description	Data Type	Preservation (HSA; NHPA)	Systems (NRIS; LCS)	Real Property & Cultural	Financial mandates (CFO; etc)
Current Building/Structure Name	Current popular name of building/structure (list all known current names here)	Character	--	NRIS-- Resource Name; LCS-- Preferred Structure Name	--	--
Original Building/Structure Name	Original popular name of building/structure	Character	--	NRIS-- Resource Name or Other Name	--	--
Construction Type	Describes construction duration criteria (permanent, semi-permanent, or temporary)	Alphanumeric	--	--	DoDI 4165.14	--
Structural Material	Describes structural material used in constructing building/structure	Alphanumeric	--	NRIS-- Materials Description; LCS-- Structural Components	--	--
Non-structural Material	Describes non-structural material used in constructing building/structure (e.g. enclosure or cladding)	Alphanumeric	--	NRIS-- Materials Description; LCS-- Materials	--	--
Building Square Feet	Area of building expressed in square feet	Numeric	--	LCS-- Square Feet	--	--
Structure Volume	Volume of structure expressed in cubic feet	Numeric	--	LCS-- Volume	--	--
Standard Plan No.	Indicates military standard plan used in constructing building/structure	Alphanumeric	HSA--generally refers to Resource Records.	--	--	--
Architectural Style	Name of building/structure's architectural style (e.g. Colonial or Georgian)	Alphanumeric	--	NRIS	--	--
Short Physical Description	Write-in field for a brief description of the building/structure	Character	--	LCS	--	--
Year Built	Calendar year in which construction was completed	Numeric	NHPA--often program trigger for evaluating building/structure.	--	DoDI 4165.14	--
Time Period	Describes approximate date of completion or span of years in which building/structure was constructed (e.g. ca. 1945 or 1850-1874)	Character	--	NRIS; LCS-- Construction Period	--	--
Year Acquired	Calendar year in which building/structure was acquired by DoD reporting component	Numeric	--	--	DoDI 4165.14	--

Data	Data Description	Data Type	Preservation (HSA; NHPA)	Systems (NRIS; LCS)	Real Property & Cultural	Financial mandates (CFO; etc)
Building/Structure Condition	Physical condition of building/structure	Alphanumeric	NHPA-- program trigger for eligibility of building/ structure	LCS--Structure Condition	DoDI 4165.14	--
Year Condition Assessed	FY in which the condition of building/structure was assessed	Numeric	--	LCS	--	--
Date of Last Physical Inventory	Indicates the date on which the real property record was reconciled with the actually building/structure	Alphanumeric	--	--	DoDI 4165.14-- requires 3-year physical inventory cycle	--
Historic Building/Structure Covenants	Legal conditional agreements regarding historic buildings/structures	Character	--	--	--	--
Historic Building/Structure Agreements	Write-in field for agreements (programmatic or otherwise) regarding the treatment of historic building/structure	Character	NHPA	--	--	--
Capehart/Wherry Housing Indicator	Indicates whether housing was constructed under Capehart/Wherry program	Alphanumeric; yes/no	--	--	--	--
Restriction Code	Denotes restriction to building/structure records/data (e.g. resource houses classified projects)	Alphanumeric; yes/no	NHPA-- program trigger preventing evaluation of building/structure.	NRIS	--	--
LOCATION TABLE						
Country	Country in which building/structure is located	Alphanumeric	--	--	DoDI 4165.14	--
State Name	Name of state in which most of building/structure is located	Alphanumeric	--	NRIS; LCS-- Structure State	--	--
County Name	Name of county in which most of building/structure is located	Alphanumeric	--	NRIS; LCS-- Structure County	--	--
City Name	Name of metropolitan area or city closest to building/structure	Alphanumeric	--	NRIS	--	--
Street Address	Street address or boundary for building/structure	Character	--	NRIS	DoDI 4165.14 (also for lease locations)	--
UTM Zone No.	Identifier for UTM zone on UTM grid system	Numeric	--	NRIS; LCS-- Zone	--	--
UTM Easting Centroid	Easting center point (WGS84)	Numeric	--	NRIS	--	--
UTM Northing Centroid	Northing center point (WGS84)	Numeric	--	NRIS	--	--

Data	Data Description	Data Type	Preservation (HSA; NHPA)	Systems (NRIS; LCS)	Real Property & Cultural	Financial mandates (CFO; etc)
USE/FUNCTION						
Building/Structure Status	Operational status of building/structure (e.g. active, inactive, excessed, etc.)	Alphanumeric	NHPA--encourages use	--	DoDI 4165.14	--
Current CATCODE	Nomenclature for current function of building/structure (includes function of leases)	Alphanumeric	--	NRIS--Current Function Description; LCS--Primary Current Use	--	--
Original CATCODE	Nomenclature for original function of building/structure	Alphanumeric	--	LCS--Primary Historic Function	--	--
Interim Uses	Write-in field for building/structure uses between original & current functions.	Character	--	LCS--Other Functions/ Uses	--	--
Museum Collections Status	Indicates whether building/structure contains museum collections.	Alphanumeric; yes/no	--	LCS--Structure Contains Museum Collections?	--	--
Monument/Memorial Status	Indicates whether structure is part of a monument or memorial's infrastructure	Alphanumeric				DoD 7000.14-R
Site Primary Function	Primary mission function of overall site (e.g. weapons range, depot storage, shipyard, etc.)	Alphanumeric	--	--	DoDI 4165.14	--
HISTORY/NATIONAL REGISTER						
NRHP Status	Status with respect to placement on NRHP (e.g. listed-individually, listed-contributing element of district, eligible-individually, eligible-contributing element of district, nominated, removed from listing, not historic, survey in progress, not surveyed, etc.)	Alphanumeric	NHPA	LCS--National Register Status	DoDI 4165.14	--
NRHP Listed Date	Date building/structure was listed on NRHP	Alphanumeric	NHPA	NRIS; LCS--National Register Date	--	--
NHL Status	Status with respect to designation as a NHL (e.g. individual landmark, contributing element of NHL district or not a landmark)	Alphanumeric	NHPA	LCS--National Historic Landmark?	--	--
NHL Designation Date	Date building/structure was designated a NHL.	Alphanumeric	NHPA	LCS--National Historic Landmark Date	--	--

Data	Data Description	Data Type	Preservation (HSA; NHPA)	Systems (NRIS; LCS)	Real Property & Cultural	Financial mandates (CFO; etc)
World Heritage List Status	Status with respect to placement on the World Heritage List	Alphanumeric; yes/no	NHPA	--	--	--
World Heritage Listed Date	Date building/structure was listed on World Heritage List	Alphanumeric	NHPA	--	--	--
Applicable Criteria	Descriptive name of general standards by which significance of building/structure is judged (A=event; B=person; C=architecture/engineering; D=information potential)	Alphanumeric	NHPA	NRIS	--	--
Aspects of Integrity	General integrity standards by which significance of building/structure is judged (e.g. location, design, setting, materials, workmanship, feeling, and association)	Alphanumeric; allow multiple selections	NHPA	--	--	--
Criteria Exception	Short descriptive name of exceptions to standards by which significance of historic building/structure is judged (e.g. building/structure achieving significance within past 50 years)	Alphanumeric	NHPA	NRIS; LCS-- Group	--	--
Significant Person	Proper name of person associated with building/structure	Character	NHPA	NRIS	--	--
Designer	Name of designing architect for buildings; name of designing engineer if structure	Character	NHPA	NRIS; LCS	--	--
Designer Occupation	Discipline of the primary designer (e.g. architect, engineer, landscape architect, etc.)	Alphanumeric	--	LCS	--	--
Historic Features	Write-in field listing historically significant features	Character	--	--	--	--
Area of Significance	Name of National Register recognized areas of significance for building/structure (e.g. maritime history or communications)	Alphanumeric	NHPA	NRIS	--	--
Significance Year or Period	Year(s) in which building/structure achieved its significance	Character	NHPA	NRIS	--	--
Level of Significance	Describes extent of significance (e.g. State or Local)	Alphanumeric	NHPA	NRIS; LCS-- Significance Level	--	--

Data	Data Description	Data Type	Preservation (HSA; NHPA)	Systems (NRIS; LCS)	Real Property & Cultural	Financial mandates (CFO; etc)
Short Significance Statement	Brief statement of why building/structure is significant	Character	--	LCS--Short Significance Description	--	--
Historical Marker Status	Indicates whether building/structure has historical marker commemorating historic significance	Alphanumeric; yes/no	HSA	--	--	--
NPS Certification	Describes current status or NPS decision of National Register application (e.g. determined eligible or boundary decrease)	Alphanumeric	--	NRIS	--	--
NPS Certification Date	Date of NPS decision on National Register application (e.g. listed date)	Alphanumeric	--	NRIS	--	--
Documentation No.	Denotes file numbers for formal documentation (e.g. NR nominations, HABS/HAER, state documentation, etc.)	Character	HSA--generally refers to Resource Records; NHPA	NRIS; LCS--Reference No.	--	--
Documentation Description	Describes type & level of formal documentation (e.g. NR nominations, HABS/HAER, state documentation, etc.)	Alphanumeric	HSA--generally refers to Resource Records; NHPA	NRIS; LCS--Source & Documentation Level	--	--
Documentation Author	Name of the person who created or last updated documentation (which ever is more recent)	Character	--	LCS--Last Updated By	--	--
Documentation Date	Date of documentation creation or last update (which ever is more recent)	Alphanumeric	--	LCS--Last Updated	--	--
Documentation Location	Indicates location of formal documentation (e.g. NPS, Library of Congress, state repository, etc.)	Alphanumeric	HSA--generally refers to Resource Records; NHPA	NRIS--Prime Flag	--	--
Historic Data List	Write-in field listing types/locations of historic data resources on building/structure (e.g. original real property records, photos, etc.)	Character	HSA--generally refers to Resource Records; NHPA	LCS--Graphic	--	--
Nominator Name	Describes nominating organization (e.g. Federal Agency or State Government)	Alphanumeric	--	NRIS	--	--
Nomination Name	Describes nomination submission (e.g. National Historic Landmark or National Memorial)	Alphanumeric	--	NRIS	--	--

Data	Data Description	Data Type	Preservation (HSA; NHPA)	Systems (NRIS; LCS)	Real Property & Cultural	Financial mandates (CFO; etc)
Historic District Name	Name of historic district to which building/structure belongs	Character	--	LCS--LCS Historic District ID	--	--
Historic District Contributing Buildings/Structures	No. of contributing buildings/structures in historic district to which subject building/structure belongs	Numeric	NHPA	NRIS-- buildings & structures tracked separately	--	--
Historic District Noncontributing Buildings/Structures	No. of noncontributing buildings/structures in historic district to which subject building/structure belongs	Numeric	NHPA	NRIS-- buildings & structures tracked separately	--	--
UNDERTAKINGS						
Project Name	Popular name for undertaking on building/structure	Character	NHPA	NRIS	--	--
Project Sponsoring Component	Describes installation, base, activity, major command, or claimant carrying out building/structure project	Alphanumeric	--	LCS--Ultimate & Interim Treatment Responsibility	--	--
Project Executing Agency	Describes federal agency carrying out building/structure project (e.g. Corps of Engineers or NPS)	Alphanumeric	NHPA	NRIS	--	--
Project Status	Indicator as to whether project is approved, underway, or complete (input most advanced stage)	--	--	LCS--various Ultimate Treatment & Interim Treatment categories	--	--
Undertaking Impact Level	Severity of project's impacts to building/structure (e.g. effect, out for comment, no effect, etc.)	Alphanumeric	NHPA-- referred to as threats	LCS--Impact Level	--	--
Undertaking Impact Description	Brief description of project impacts to building/structure	Character	NHPA-- referred to as threats	LCS-- Primary Impact & Other Impact Type	--	--
SHPO Comment Tracking	Write-in field for State Historic Preservation Officer comments on undertaking	Character	NHPA	--	--	--
ACHP Notification Status	Indicates whether undertaking required ACHP consultation	Alphanumeric; yes/no	NHPA	--	--	--
ACHP Comment Tracking	Write-in field for Advisory Council comments on undertaking	Character	NHPA	--	--	--
Interested Parties Notification Status	Indicates whether undertaking was carried out in consultation with interested parties	Alphanumeric; yes/no	NHPA	--	--	--

Data	Data Description	Data Type	Preservation (HSA; NHPA)	Systems (NRIS; LCS)	Real Property & Cultural	Financial mandates (CFO; etc)
Interested Parties Comment Tracking	Write-in field for interested parties' comments on undertaking	Character	NHPA	--	--	--
Preservation Treatment Type	Type of Preservation Treatment per SOI standards (e.g. preservation, rehabilitation, restoration, reconstruction, recordation, etc.)	Alphanumeric	HSA; NHPA	NRIS	--	--
Historic Building/Structure Treatment Category	Assigned treatment category based on relative significance & contemporary value (e.g. Navy Category I-Long Term Preservation)	Alphanumeric	--	--	--	--
TREATMENT / OPERATIONS / MAINTENANCE / REPAIR ACTIONS & ASSOCIATED COST DATA						
Treatment/OM&R Responsible Party	Agency, component, or organization responsible for Treatment/OM&R activities (e.g. DON, HQACC, ACME Privatization Company, etc.)	Alphanumeric	--	LCS--Routine & Cyclic Maintenance Responsibility	--	All apply
Treatment/OM&R Action Type	Indicates whether action is an SOI treatment (e.g. preservation, rehabilitation, restoration, or reconstruction) or operations, maintenance, repair, or replacement	Alphanumeric	--	--	--	All apply
Treatment/OM&R Category	Indicates whether an action is a capital improvement or routine/cyclic M&R	Alphanumeric				All apply
Treatment/OM&R Association	Indicates whether an action is associated with heritage- or operations-related aspects of building/structure	Alphanumeric				All apply
Treatment/OM&R Action MASTERSPEC Division	General category(s) of Treatment/OM&R action based on MASTERSPEC divisions (e.g. masonry, finishes, mechanical, etc.)	Alphanumeric; allow multiple selections	--	--	--	All apply
Treatment/OM&R Action Building/Structure Component	Specific component(s) involved in Treatment/OM&R action based on MASTERSPEC sections (e.g. condensing unit, driven piles, slate shingles, etc.)	Alphanumeric; allow multiple selections	--	--	--	All apply

Data	Data Description	Data Type	Preservation (HSA; NHPA)	Systems (NRIS; LCS)	Real Property & Cultural	Financial mandates (CFO; etc)
Treatment/OM&R Action Cost	Total cost of Treatment/OM&R action in USD	Numeric	--	LCS--Ultimate Treatment Cost	--	All apply
Treatment/OM&R Action Warranty(s)	Warranty on Treatment/OM&R action parts & labor expressed in years (used to play out annual cost per year of Treatment/OM&R action)	Numeric	--	--	--	All apply
Treatment/OM&R Action Lifecycle Cost	Estimated per year cost of Treatment/OM&R action over life of warranty (USD cost/warranty in years)	Numeric	--	--	--	All apply
Sustainment Funding Organization	Identifies organization responsible for sustainment of building/structure (e.g. public works, housing, MWR/NAF, tenants, etc.)	Alphanumeric	--	--	DoDI 4165.14	All apply
Sustainment Fund Type	Identifies fund type for sustainment of building/structure (e.g. O&M, housing, MWR/NAF, etc.)	Alphanumeric	--	--	DoDI 4165.14	All apply
ACQUISITIONS / DISPOSALS / EXCESSES						
Forecasted Acquisition Year	FY in which acquisition of additional building/structure will be accomplished	Numeric	--	--	DoDI 4165.14	--
Forecasted Acquisition Site	Specific site where additional building/structure will be located	Character	--	--	DoDI 4165.14	--
Forecasted Acquisition CATCODE	Function code for additional building/structure	Numeric	--	--	DoDI 4165.14	--
Forecasted Acquisition Type	Mechanism for acquiring additional building/structure (e.g. leased-in, transferred-in, etc.)	Alphanumeric	--	--	DoDI 4165.14	--
Planned Disposal	Planned disposition of building/structure (continued use, or disposal action under-way/pending)	Alphanumeric	--	--	DoDI 4165.14	--
Forecasted Disposal Year	FY building/structure is to be disposed	Numeric	--	--	DoDI 4165.14	--
Forecasted Disposal Type	Mechanism for disposing of building/structure (e.g. demolition, removal, transferred-out, etc.)	Alphanumeric	--	--	DoDI 4165.14	--

Data	Data Description	Data Type	Preservation (HSA; NHPA)	Systems (NRIS; LCS)	Real Property & Cultural	Financial mandates (CFO; etc)
Forecasted Disposal Building Count	No. of buildings to be disposed in reporting FY	Numeric	--	--	DoDI 4165.14	--
Economic Analysis Status	Indicates whether economic analysis has been done for buildings/structures considered for demolition (e.g. no analysis, in progress, complete-revitalize, complete-replace, or complete-demo)	Alphanumeric	--	--	DoDI 4715.3	--
SOI Historic Building/Structure Transfer Approval Status	Indicates whether transfer of historic building/structure from Federal to private ownership has been approved by SOI	Alphanumeric; yes/no	NHPA	--	--	--
Forecasted Excess Year	FY in which building/structure is excess	Numeric	--	--	DoDI 4165.14	--
Forecasted Excess Building Count	No. of buildings that are excess in reporting FY	Numeric	--	--	DoDI 4165.14	--
LEASES						
Lease Instrument (contract) No.	Lease contract no. assigned by granting authority that issued lease	Alphanumeric	--	LCS-- Management Agreement	DoDI 4165.14	--
Lease Start Date	Date lease is in effect	Alphanumeric	--	--	DoDI 4165.14	--
Lease End Date	Date lease will terminate	Alphanumeric	--	LCS-- Management Agreement Expiration Date	DoDI 4165.14	--
Lease Annual Cost	Annual cost of lease in dollars & cents; include sum of all items defined in lease contract	Numeric	--	--	DoDI 4165.14	--
Lease Items Included: Security	Building/structure security services	Alphanumeric; yes/no	--	--	DoDI 4165.14	--
Lease Items Included: Maintenance	Building/structure maintenance/sustain-ment	Alphanumeric; yes/no	--	--	DoDI 4165.14	--
Lease Funding Organization	Organization that pays for lease	Character	--	--	DoDI 4165.14	--

Appendix B: Matrix of Relevant Data Types Available From Federal Data Models

Relevant Data Types From Current Federal Models Available for Inclusion in a Standard Geospatial Historic Facility Data Model

Data	Data Description	SDSFIE 2.2	AF Model	NRIS	Benning	LCS
OWNERSHIP/USER TABLE						
Reporting DoD Component	Service responsible for real property accountability	OFF_DESIG	OWNER_ID	OWNER OWNERCD		
Major Command/Claimant	Major command/claimant to which installation is assigned					
Installation/Base/Activity	Identifies installation with real property inventory reporting control over building/structure	INSTLN_ID	INSTLN_ID			
Government Interest	Defines government's legal or financial stake, right, or title to building/structure (e.g. owned or leased)		OWNERSHIP			Legal Interest
Owning Agency	Describes actual owner of building/structure (e.g. AF, City of San Antonio, NASA, etc.)	OWNER_ID AGENCY_ID	OWNER_ID	OWNERCD		Federal Government & Local Government Owner
Occupant	Identifies user(s) of building/structure (include organization to which lease has been granted)	USE_STR_D	USE_ID SITE_USE	FEDAG		
BUILDING/STRUCTURE TABLE						
Resource Type	Describes type of resource (e.g. building or structure)	STR_TYP_D	RES_TYPE	RETYPE		Structure Type
Current Building/Structure No.	Unique number that denotes specific building/structure	BUILD_ID BUILDNG_NO	FAC_NUM FACIL_NUM	REFNUM	BLDG_NUM BUILDING_N	Structure Number
Original Building/Structure No.	Original unique number that denotes specific building/structure	BUILD_ID BUILDNG_NO	OTHER_NAME	REFNUM		

Data	Data Description	SDSFIE 2.2	AF Model	NRIS	Benning	LCS
Current Building/Structure Name	Current popular name of building/structure (list all known current names here)	STRUCTNAME	RES_NAME	RESNAME	NAME	Preferred Structure Name
Original Building/Structure Name	Original popular name of building/structure		OTHER_NAME	OTHRNAME		
Construction Type	Describes duration construction criteria (permanent, semi-permanent, or temporary)	STR_TYPE_D				
Structural Material	Describes structural material used in constructing building/structure	STR_MAT_D	MATERIAL MATERIAL_LABEL	MATCD MAT		Structural Components
Non-structural Material	Describes non-structural material used in constructing building/structure (e.g. enclosure or cladding)					Materials
Building Square Feet	Area of building expressed in square feet	Numeric	AREAINSIDE AREAFLOOR			Square Feet
Structure Volume	Volume of structure expressed in cubic feet	Numeric				Volume
Standard Plan No.	Indicates military standard plan used in constructing building/structure		EXTPLAN INTPLAN			
Architectural Style	Name of building/structure's architectural style (e.g. Colonial or Georgian)	ARCH_STY_D	PRIMARY_STYLE INFLUENCE_STYLE	ARSTYLE		
Short Physical Description	Write-in field for a brief description of the building/structure	NARRATIVE				Short Significant Description
Year Built	Calendar year in which construction was completed	BUILT_DATE	DATE_R			--
Time Period	Describes approximate date of completion or span of years in which building/structure was constructed (e.g. ca. 1945 or 1850-1874)	AFFIL_D	[COMPONENT]_DATES	PERIOD		Construction Period
Year Acquired	Calendar year in which building/structure was acquired by DoD reporting component					
Building/Structure Condition	Physical condition of building/structure	STR_CND_D STR_DESC DISTURB_D				Structure Condition
Year Condition Assessed	FY in which the condition of building/structure was assessed					Year Condition Assessed

Data	Data Description	SDSFIE 2.2	AF Model	NRIS	Benning	LCS
Date of Last Physical Inventory	Indicates the date on which the real property record was reconciled with the actually building/structure					
Historic Building/Structure Covenants	Legal conditional agreements regarding historic buildings/structures					
Historic Building/Structure Agreements	Write-in field for agreements (programmatic or otherwise) regarding the treatment of historic building/structure					
Capehart/Wherry Housing Indicator	Indicates whether housing was constructed under Capehart/Wherry program				PROGRAM	
Restriction Code	Denotes restriction to building/structure records/data (e.g. resource houses classified projects)	AREA_STT_D REASON		RESTRICT		
LOCATION TABLE						
Country	Country in which building/structure is located	COUNTRY_D				--
State Name	Name of state in which most of building/structure is located	STATE_D	STATE	STATE		Structure State
County Name	Name of county in which most of building/structure is located	COUNTY_ID	COUNTY	COUNTY		Structure County
City Name	Name of metropolitan area or city closest to building/structure	CITY_NAME	CITY	CITY		
Street Address	Street address or boundary for building/structure	ADDRESS_ID ADDRESS_1 ADDRESS_2	STREET STREET_NUM	ADDRESS	STREET ST_NUM	
UTM Zone No.	Identifier for UTM zone on UTM grid system	UTM_ZONE	UTMZONE	UTMZONE		Zone
UTM Easting Centroid	Easting center point (WGS84)		CENT_EAST	EASTING_CENTROID		
UTM Northing Centroid	Northing center point (WGS84)		CENT_NORTH	NORTHING_CENTROID		
USE/FUNCTION						
Building/Structure Status	Operational status of building/structure (e.g. active, inactive, excessed, etc.)	PROP_STT_D STR_STAT_D	LANDUSE		STATUS	
Current CATCODE	Nomenclature for current function of building/structure (includes function of leases)	USE_STR_D STT_USE_D	LANDUSE	FUNCCD		Primary Current Use

Data	Data Description	SDSFIE 2.2	AF Model	NRIS	Benning	LCS
Original CATCODE	Nomenclature for original function of building/structure	USE_STR_D STT_USE_D	SITE_USE	FUNCCD HFUNCD		Primary Historic Function
Interim Uses	Write-in field for building/structure uses between original & current functions.	NARRATIVE				Other Functions/ Uses
Museum Collections Status	Indicates whether building/structure contains museum collections.					Structure Contains Museum Collections?
Monument/Memorial Status	Indicates whether structure is part of a monument or memorial's infrastructure	Alphanumeric				
Site Primary Function	Primary mission function of overall site (e.g. weapons range, depot storage, shipyard, etc.)	USE_STR_D	LANDUSE			
HISTORY/NATIONAL REGISTER						
NRHP Status	Status with respect to placement on NRHP (e.g. listed-individually, listed-contributing element of district, eligible-individually, eligible-contributing element of district, nominated, removed from listing, not historic, survey in progress, not surveyed, etc.)	NREG_STT_D	OPINION	CERT	STATUS	National Register Status
NRHP Listed Date	Date building/structure was listed on NRHP		[REGISTER]. DATE_R	LISTED_ DATE		National Register Date
NHL Status	Status with respect to designation as a NHL (e.g. individual landmark, contributing element of NHL district or not a landmark)				STATUS	National Historic Landmark?
NHL Designation Date	Date building/structure was designated a NHL.					National Historic Landmark Date
World Heritage List Status	Status with respect to placement on the World Heritage List					
World Heritage Listed Date	Date building/structure was listed on World Heritage List					

Data	Data Description	SDSFIE 2.2	AF Model	NRIS	Benning	LCS
Applicable Criteria	Descriptive name of general standards by which significance of building/structure is judged (A=event; B=person; C=architecture/engineering; D=information potential)	NREG_CRI_D	A B C D	APCRITCD APCRIT		
Aspects of Integrity	General integrity standards by which significance of building/structure is judged (e.g., location, design, setting, materials, workmanship, feeling, and association)					
Criteria Exception	Short descriptive name of exceptions to standards by which significance of historic building/structure is judged (e.g. building/structure achieving significance within past 50 years)	NREG_CON_D	CRITCONSID	CRITCN		Group
Significant Person	Proper name of person associated with building/structure			SIGNAME		
Designer	Name of designing architect for buildings; name of designing engineer if structure	ARCHITECT	ARCHITECT	ARCHITECT		Designer
Designer Occupation	Discipline of the primary designer (e.g. architect, engineer, landscape architect, etc.)					Designer Occupation
Historic Features	Write-in field listing historically significant features					
Area of Significance	Name of National Register recognized areas of significance for building/structure (e.g. maritime history or communications)	SIGNIF_D	THEMES	AREASG AREASGCD		
Significance Year or Period	Year(s) in which building/structure achieved its significance		SIG_PER	SIGYEAR		
Level of Significance	Describes extent of significance (e.g. State or Local)			LEVSGCD		Significance Level
Short Significance Statement	Brief statement of why building/structure is significant		SIGNIF_LEVEL	LEVSG		Short Significance Description
Historical Marker Status	Indicates whether building/structure has historical marker commemorating historic significance					

Data	Data Description	SDSFIE 2.2	AF Model	NRIS	Benning	LCS
NPS Certification	Describes current status or NPS decision of National Register application (e.g. determined eligible or boundary decrease)		OPINION OP_SOURCE [D_REGSTT]. DEFINITION	CERTCD CERT		
NPS Certification Date	Date of NPS decision on National Register application (e.g. listed date)		[REGISTER]. DATE_R			
Documentation No.	Denotes file numbers for formal documentation (e.g. NR nominations, HABS/HAER, state documentation, etc.)	HABS_NUM HAER_NUM		OTHDOCCD		Reference No.
Documentation Description	Describes type & level of formal documentation (e.g. NR nominations, HABS/HAER, state documentation, etc.)	REF_TYP_D	REF_TYPE	OTHDOC		Source & Documentation Level
Documentation Author	Name of the person who created or last updated documentation (which ever is more recent)	AUTH_NAME				Last Updated By
Documentation Date	Date of documentation creation or last update (which ever is more recent)	DATE_PUB				Last Updated
Documentation Location	Indicates location of formal documentation (e.g. NPS, Library of Congress, state repository, etc.)	MEDIA_ID REFER_ID	REPOSITORY_ID			
Historic Data List	Write-in field listing types/locations of historic data resources on building/structure (e.g. original real property records, photos, etc.)	NARRATIVE	REF_TYPE			Graphic
Nominator Name	Describes nominating organization (e.g. Federal Agency or State Government)		[INSTITUTION].ORGANIZATION	NOMNA		
Nomination Name	Describes nomination submission (e.g. National Historic Landmark or National Memorial)			NOMNAME		
Historic District Name	Name of historic district to which building/structure belongs	DIST_DESC DIST_NAME			DISTRICT_N ID	Historic District ID
Historic District Contributing Buildings/Structures	No. of contributing buildings/structures in historic district to which subject building/structure belongs		CONTRIB	NUMCBLDG NUMCSTRC		

Data	Data Description	SDSFIE 2.2	AF Model	NRIS	Benning	LCS
Historic District Noncontributing Buildings/Structures	No. of noncontributing buildings/structures in historic district to which subject building/structure belongs			NUMBBLDG NUMNSTRC		
UNDERTAKINGS [[[How shall we incorporate capital improvements into this table?]]]						
Project Name	Popular name for undertaking on building/structure	PROJ_NAME	UND_NAME	PROJECT		
Project Sponsoring Component	Describes installation, base, activity, major command, or claimant carrying out building/structure project	PRJ_APP_D FUND_SRC_D				Ultimate & Interim Treatment Responsibility
Project Executing Agency	Describes federal agency carrying out building/structure project (e.g. Corps of Engineers or NPS)			FEDAGCD FEDAG		
Project Status	Indicator as to whether project is approved, underway, or complete (input most advanced stage)	PROJ_STT_D				various Ultimate Treatment & Interim Treatment categories
Undertaking Impact Level	Severity of project's impacts to building/structure (e.g. effect, out for comment, no effect, etc.)	FIM_AREA_D				Impact Level
Undertaking Impact Description	Brief description of project impacts to building/structure	PROJ_DESC				Primary Impact & Other Impact Type
SHPO Comment Tracking	Write-in field for State Historic Preservation Officer comments on undertaking					
ACHP Notification Status	Indicates whether undertaking required ACHP consultation					
ACHP Comment Tracking	Write-in field for Advisory Council comments on undertaking					
Interested Parties Notification Status	Indicates whether undertaking was carried out in consultation with interested parties					
Interested Parties Comment Tracking	Write-in field for interested parties' comments on undertaking					
Preservation Treatment Type	Type of Preservation Treatment per SOI standards (e.g., preservation, rehabilitation, restoration, reconstruction recordation, etc.)	PROJ_DESC	DESCRIPTION			

Data	Data Description	SDSFIE 2.2	AF Model	NRIS	Benning	LCS
Historic Building/Structure Treatment Category	Assigned treatment category based on relative significance & contemporary value (e.g. Navy Category I-Long Term Preservation)					
TREATMENT / OPERATIONS / MAINTENANCE / REPAIR ACTIONS & ASSOCIATED COST DATA						
Treatment/OM&R Responsible Party	Agency, component, or organization responsible for Treatment/OM&R activities (e.g. DON, HQACC, ACME Privatization Company, etc.)					Routine & Cyclic Maintenance Responsibility
Treatment/OM&R Action Type	Indicates whether action is an SOI treatment (e.g. preservation, rehabilitation, restoration, or reconstruction) or operations, maintenance, repair, or replacement					
Treatment/OM&R Category	Indicates whether an action is a capital improvement or routine/cyclic M&R	Alphanumeric				
Treatment/OM&R Association	Indicates whether an action is associated with heritage- or operations-related aspects of building/structure	Alphanumeric				
Treatment/OM&R Action MASTERSPEC Division	General category(s) of Treatment/OM&R action based on MASTERSPEC divisions (e.g. masonry, finishes, mechanical, etc.)					
Treatment/OM&R Action Building/Structure Component	Specific component(s) involved in Treatment/OM&R action based on MASTERSPEC sections (e.g. condensing unit, driven piles, slate shingles, etc.)					
Treatment/OM&R Action Cost	Total cost of Treatment/OM&R action in USD					Ultimate Treatment Cost
Treatment/OM&R Action Warranty(s)	Warranty on Treatment/OM&R action parts & labor expressed in years (used to play out annual cost per year of Treatment/OM&R action)					

Data	Data Description	SDSFIE 2.2	AF Model	NRIS	Benning	LCS
Treatment/OM&R Action Lifecycle Cost	Estimated per year cost of Treatment/OM&R action over life of warranty (USD cost/warranty in years)					
Sustainment Funding Organization	Identifies organization responsible for sustainment of building/structure (e.g. public works, housing, MWR/NAF, tenants, etc.)					
Sustainment Fund Type	Identifies fund type for sustainment of building/structure (e.g. O&M, housing, MWR/NAF, etc.)					
ACQUISITIONS / DISPOSALS / EXCESSES						
Forecasted Acquisition Year	FY in which acquisition of additional building/structure will be accomplished					
Forecasted Acquisition Site	Specific site where additional building/structure will be located					
Forecasted Acquisition CATCODE	Function code for additional building/structure					
Forecasted Acquisition Type	Mechanism for acquiring additional building/structure (e.g. leased-in, transferred-in, etc.)					
Planned Disposal	Planned disposition of building/structure (continued use, or disposal action underway/pending)	DEMOL_DATE				
Forecasted Disposal Year	FY building/structure is to be disposed					
Forecasted Disposal Type	Mechanism for disposing of building/structure (e.g. demolition, removal, transferred-out, etc.)					
Forecasted Disposal Building Count	No. of buildings to be disposed in reporting FY					
Economic Analysis Status	Indicates whether economic analysis has been done for buildings/structures considered for demolition (e.g. no analysis, in progress, complete-revitalize, complete-replace, or complete-demo)					

Data	Data Description	SDSFIE 2.2	AF Model	NRIS	Benning	LCS
SOI Historic Building/Structure Transfer Approval Status	Indicates whether transfer of historic building/structure from Federal to private ownership has been approved by SOI					
Forecasted Excess Year	FY in which building/structure is excess					
Forecasted Excess Building Count	No. of buildings that are excess in reporting FY					
LEASES						
Lease Instrument (contract) No.	Lease contract no. assigned by granting authority that issued lease					Management Agreement
Lease Start Date	Date lease is in effect					
Lease End Date	Date lease will terminate					Management Agreement Expiration Date
Lease Annual Cost	Annual cost of lease in dollars & cents; include sum of all items defined in lease contract					
Lease Items Included: Security	Building/structure security services					
Lease Items Included: Maintenance	Building/structure maintenance/sustainment					
Lease Funding Organization	Organization that pays for lease					

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14. ABSTRACT The U.S. Army Engineer Research and Development Center – Construction Engineering Research Laboratory (ERDC-CERL) was tasked to co-develop with the ERDC Information Technology Laboratory (ERDC-ITL) a definitive geospatial data model to include data types that will (1) optimally describe historic facilities in terms that are essential for complete and accurate reporting and (2) function within SDSFIE/FDSFIE (Spatial Data Standard for Facilities, Infrastructure, and Environment/Facility Management Standard for Facilities, Infrastructure, and Environment). The purpose of the investigation was to help develop an improved methodology that will provide more reliable information, more efficiently, about the Department of Defense historic property inventory. An improved methodology for tracking historic property attributes and locations could reduce Department of Defense administrative costs related to complying with the reporting requirements of the National Historic Preservation Act of 1966 (as amended).					
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